

CITY OF CAMBRIDGE WATER DEPARTMENT

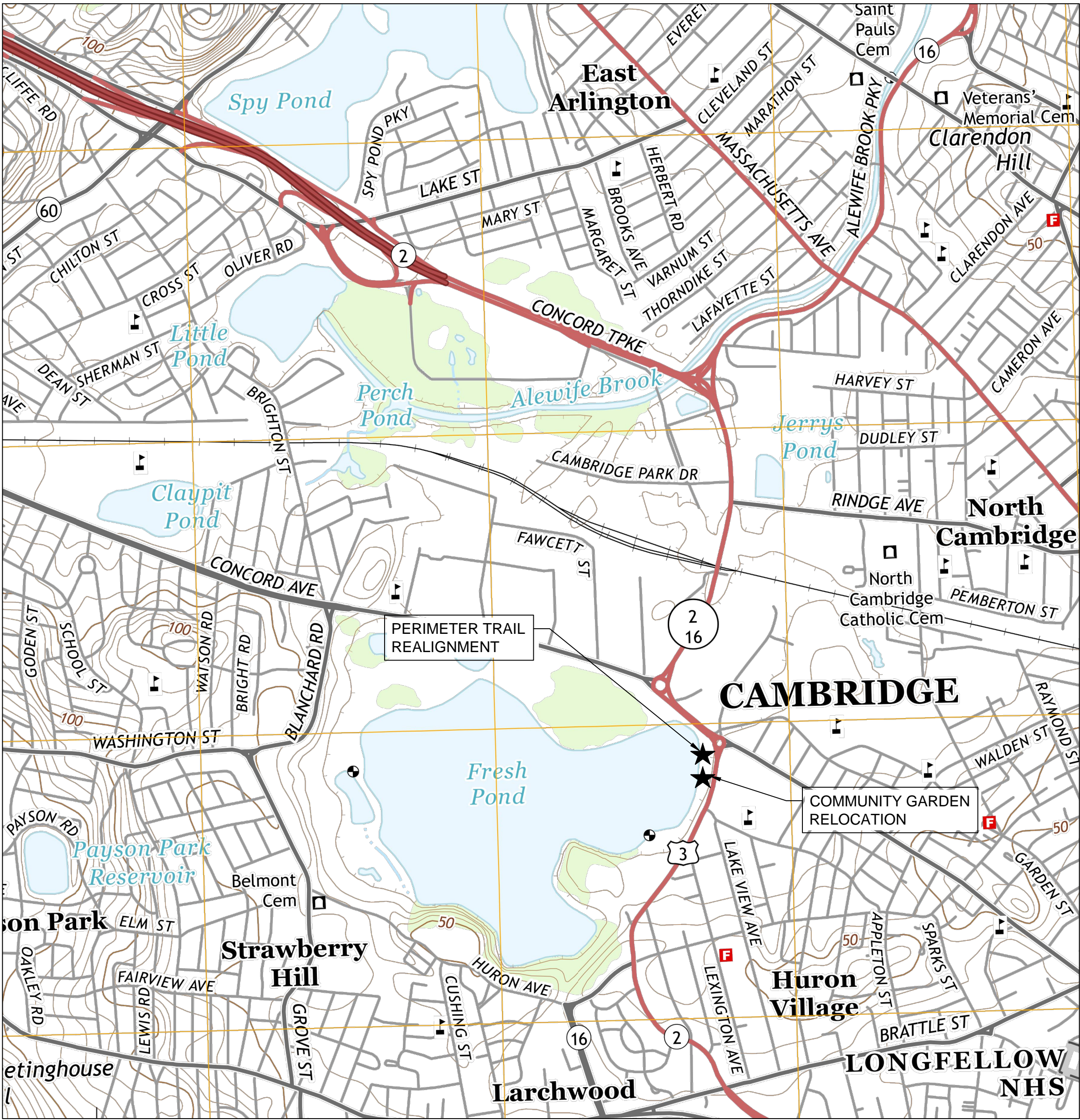
FRESH POND AND COMMUNITY GARDENS DRAINAGE IMPROVEMENTS PROJECT

CITY OF CAMBRIDGE, MIDDLESEX COUNTY, MASSACHUSETTS

OCTOBER 2015

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LOCATION PLAN

SCALE: 1" = 1000'
0 1000 2000 3000
1"=1000'
SCALE FEET

75% SUBMITTAL

PREPARED BY PROJECT DESIGN TEAM:



GENERAL NOTES:

1. TOPOGRAPHIC SURVEY OF EXISTING CONDITIONS PROVIDED BY PRECISION LAND SURVEYING, INC. DATED JANUARY 6, 2015. TEST PITS FOR SOIL TESTING WERE PERFORMED BY KLEINFELDER (FORMERLY SEA CONSULTANTS INC.), ON JUNE 16, 2010.
2. LOCATION AND ELEVATIONS OF ALL EXISTING SITE FEATURES, UTILITIES AND PROPOSED WORK ARE BASED ON THE BEST AVAILABLE INFORMATION. EXACT LOCATION AND COMPLETENESS IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL SUCH LOCATIONS AT THE SITE PRIOR TO CONSTRUCTION AND PROTECT ALL UTILITIES ENCOUNTERED.
3. TEST PITS WERE CONDUCTED FOR PURPOSES OF DESIGN AND INDICATE CONDITIONS AT LOCATIONS OF BORINGS ONLY. SUBSURFACE CONDITIONS MAY VARY FROM THOSE SHOWN IN THE LOGS. GROUNDWATER LEVELS INDICATED IN THE LOGS ARE THOSE EXISTING AT THE TIME BORINGS WERE MADE AND DO NOT REPRESENT PERMANENT GROUNDWATER LEVELS. FOR COPIES OF TEST PIT LOGS, REFER TO APPENDIX A OF THE SPECIFICATIONS.
4. FINAL GRADING SHALL BE UNIFORM BETWEEN SPOT ELEVATIONS AND CONTOURS. PROVIDE UNIFORM SLOPE BETWEEN ELEVATIONS INDICATED ON DRAWINGS.
5. THE CONTRACTOR SHALL TEMPORARILY MATCH EXISTING GRADES AND CONDITIONS WITHIN THE CONSTRUCTION AREA UNTIL FINAL RESTORATION IS COMPLETE.
6. WITHIN THE LIMITS INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL PROVIDE NEW PAVEMENT IN ACCORDANCE WITH THE DRAWINGS AND DETAILS. FOR ADDITIONAL REQUIREMENTS, REFER TO THE SPECIFICATIONS.
7. ALL PATHWAYS AND STRUCTURES SHALL BE LOCATED IN ACCORDANCE WITH DIMENSIONS DEFINED ON THE LAYOUT AND GRADING & DRAINAGE PLAN AND PROFILE, SHEETS C-4 AND C-5.
8. EXISTING TREES, BUSHES, AND SHRUBS SHALL BE PROTECTED BY CONTRACTOR FROM ALL DAMAGE UNLESS IN DIRECT CONFLICT WITH PROPOSED PATHS AND FEATURES.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS AT THE SITE.
10. UNPAVED AREAS DISTURBED BY THE CONTRACTOR SHALL BE CLEARED AND GRUBBED, IF REQUIRED, AND RESTORED WITH LOAM AND SEED UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
11. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL BENCHMARK ELEVATIONS.
12. PROPERTY LINES WHERE SHOWN ARE APPROXIMATE AND INTENDED FOR GENERAL INFORMATION ONLY.
13. THE ENGINEER MAY DIRECT THE CONTRACTOR TO VARY THE PROPOSED WORK DURING CONSTRUCTION TO MEET EXISTING CONDITIONS.
14. EXCAVATION OF ANY TYPE SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT UNDERGROUND UTILITIES OR STRUCTURES ARE NOT DAMAGED. ALL ROADWAYS, PARKING AREAS, SIDEWALKS, AND OTHER STRUCTURES DISTURBED BY CONSTRUCTION IN OR OUTSIDE THE PROJECT AREA SHALL BE RETURNED TO THEIR ORIGINAL CONDITION OR BETTER AND SHALL BE GRADED TO MEET PROPOSED CONSTRUCTION AS DIRECTED BY THE ENGINEER. ALL COSTS RELATED TO THE REPAIR OF DAMAGED UTILITIES SHALL BE BORNE BY THE CONTRACTOR.
15. THE CONTRACTOR SHALL DIG TEST PITS AS DIRECTED BY THE RESIDENT ENGINEER, AND AS MAY OTHERWISE BE REQUIRED TO DETERMINE THE SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND PIPING AND UTILITIES TO SATISFY HIMSELF AND ENSURE PROPER COORDINATION OF THE WORK. TEST PITS SHALL BE AT NO ADDITIONAL COST TO THE OWNER. ANY CONFLICTS NOTED IN PROPOSED CONSTRUCTION SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
16. ALL UTILITY BOXES, MANHOLES, FRAMES, GRATES, ETC., NOT TO BE DEMOLISHED SHALL BE RESET TO THE PROPER GRADE UTILIZING APPROPRIATE MATERIALS AND PROCEDURES.
17. THE CONTRACTOR SHALL FILL AND GRADE AREAS ADJACENT TO NEW CONSTRUCTION FOR POSITIVE DRAINAGE AND AS DIRECTED BY THE ENGINEER.
18. THE CONTRACTOR SHALL ERECT EROSION CONTROL MEASURES PRIOR TO COMMENCING ANY WORK ON-SITE. REFER TO SPECIFICATIONS AND DRAWINGS.
19. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND ACTIVITIES OF HIS FORCES WITH THE OWNER, ENGINEER AND ABUTTING PROPERTY OWNERS TO MINIMIZE INTERFERENCE WITH EXISTING FACILITIES AND OPERATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
20. ALL AREAS OF EXCAVATION, BACKFILL, FILL AND GRADING SHALL BE RETURNED TO THE ORIGINAL GRADE UNLESS SHOWN ON THE DRAWINGS.
21. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
22. IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO PRESCRIBE A COMPLETE WORK OR IMPROVEMENT. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND ANY REQUIREMENTS INDICATED IN ONE OF THE DOCUMENTS IS AS BINDING AS HAVING BEEN INDICATED IN ALL. IF A CONFLICT EXISTS BETWEEN ANY OF THE CONTRACT DOCUMENTS, IT SHALL BE RESOLVED IN ACCORDANCE WITH THE "AGREEMENT".
23. STOCKPILING OF CONSTRUCTION MATERIALS WITHIN 100 FT. OF WETLANDS IS PROHIBITED.
24. THE CONTRACTOR SHALL PREMARK THE PROJECT AREA IN GENERAL AND EXCAVATION AREAS SPECIFICALLY IN WHITE AND NOTIFY THE DIG SAFE CENTER (8-1-1) A MINIMUM OF 72 BUSINESS HOURS PRIOR TO ANY EXCAVATION WORK. IN ADDITION, NOTIFICATIONS SHALL BE GIVEN TO ALL AFFECTED PRIVATE AND/OR PUBLIC UTILITIES TO PERMIT MARKING OF THEIR LINES.
25. THE CONTRACTOR SHALL OBTAIN ALL PERMITS BEFORE COMMENCING CONSTRUCTION.
26. THE CONTRACTOR MUST MAINTAIN VEHICULAR ACCESS TO EXISTING FACILITIES DURING NORMAL OPERATING HOURS. NORMAL OPERATING HOURS ARE 7:00 AM TO 4:00 PM.
27. THE CONTRACTOR SHALL EXECUTE AND COORDINATE HIS CONSTRUCTION ACTIVITIES IN SUCH A MANNER THAT VEHICULAR AND PEDESTRIAN ACCESS WILL BE MAINTAINED CONTINUOUSLY AND WITHOUT INTERRUPTION TO BUSINESSES AND ABUTTERS IN A MANNER ACCEPTABLE TO THE CITY OF CAMBRIDGE.
28. SAFETY SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE, AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT ALL TIMES.

GEOTECHNICAL NOTES:

1. FOR EARTH EXCAVATION, BACKFILL, FILL AND GRADING, SEE SPECIFICATION SECTION 02210.
2. FOR DEWATERING, SEE SPECIFICATION SECTION 02140.

SEQUENCING NOTE:

1. CONTRACTOR TO PROVIDE TEST PITS FOR VERIFICATION OF LOCATION, LAYOUT, CRITICAL DIMENSIONS AND ANY OTHER RELEVANT INFORMATION AT ALL EXISTING BURIED FACILITIES THAT REQUIRE TIE-IN, MODIFICATION, OR ANY OTHER WORK. CONTRACTOR TO PROVIDE DETAILED DRAWING SHOWING PROPOSED ROUTING AND CONNECTIONS BASED ON FIELD-VERIFIED DATA.

SPECIAL NOTES FOR TREE PROTECTION

1. REFER TO "CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS--DIVISION OF URBAN FORESTRY, TREE PROTECTION DURING CONSTRUCTION" IN THE CONTRACT DOCUMENTS. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH MASSACHUSETTS STATE LAW CHAPTER 87, SECTION 12.
2. A MASSACHUSETTS OR INTERNATIONAL CERTIFIED ARBORIST SHALL BE SUB-CONTRACTED BY THE CONTRACTOR TO PROVIDE A TREE PROTECTION PLAN AND PERFORM SPECIFIED WORK.
3. ALL TREES MUST BE PRUNED PRIOR TO CONSTRUCTION IN ACCORDANCE WITH SPECIFICATION 02910.
4. ALL TREES NOT IDENTIFIED FOR REMOVAL SHALL BE PROTECTED AGAINST CONSTRUCTION AND TRUCKING RELATED DAMAGE TO THEIR TRUNKS, ROOTS, AND LIMBS. TREE TRUNKS SHALL BE WRAPPED AND/OR BARRICADED FOR PROTECTION IF NECESSARY. TREE LIMBS SHALL BE TEMPORARILY SUPPORTED TO AVOID DAMAGE AND/OR PROFESSIONALLY PRUNED IF THEY CANNOT BE AVOIDED. BREAKAGE OF THE LIMBS SHALL NOT BE PERMITTED. IN ADDITION TO THE "CONSTRUCTION PRUNING" SPECIFICALLY IDENTIFIED, ALL TREES WITHIN THE PROJECT AREA AND ALONG TRUCK ROUTES, SHALL BE PROTECTED FROM DAMAGE OR PROFESSIONALLY PRUNED. "CONSTRUCTION PRUNING" SHALL CONSIST OF SQUARELY CUTTING LIMBS WHERE THEY CANNOT BE AVOIDED BY TRUCKS OR EQUIPMENT.
5. ALL TREE PROTECTION MEASURES AND OPERATIONS AND ALL ROOT PRUNING, TREE REMOVAL, AND TREE PRUNING SHALL BE SUBJECT TO REVIEW, APPROVAL, AND CHANGE BY THE CITY ARBORIST.
6. AT THE OWNER'S DISCRETION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY TREE DAMAGED BY CONSTRUCTION OR TRUCKING OPERATIONS, REMOVAL OF THE STUMP, AND REPLACEMENT OF THE TREE IN KIND AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL FINES MAY ALSO BE IMPOSED FOR DAMAGE AS PER CONTRACT SPECIFICATIONS.
7. BREAKAGE OF TREE ROOTS SHALL NOT BE PERMITTED AND ROOT PRUNING SHALL BE MINIMIZED. TREE ROOTS THAT CANNOT BE AVOIDED DURING CONSTRUCTION SHALL BE PRUNED IN ACCORDANCE WITH THE SPECIFICATIONS AND UNDER SUPERVISION OF THE CITY ARBORIST, INCLUDING ROOT TREATMENT IF REQUIRED.
8. THE CONTRACTOR SHALL COORDINATE WITH DIG SAFE PRIOR TO REMOVING ANY STUMPS, DAMAGE TO EXISTING SIDEWALKS, AND UTILITIES SHALL BE REPAIRED AS SPECIFIED AFTER REMOVING STUMPS.
9. TREES AND STUMPS REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW TREES AS DIRECTED. STUMP REMOVAL SHALL BE SUFFICIENT TO ALLOW PLANTING OF NEW TREE.

ABBREVIATIONS

BIT CONC	BITUMINOUS CONCRETE
CAMB	CAMBRIDGE
CB	CATCH BASIN
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
CONC	CONCRETE
DMH	DRAIN MANHOLE
ELEC	ELECTRIC
EMH	ELECTRIC MANHOLE
GC	GRANITE CURB
GG	GAS GATE
HYD	HYDRANT
I=	INVERT=
LP	LIGHT POLE
MH	MANHOLE
P	POST
PL	PLASTIC FENCE
ROW	RIGHT OF WAY
R=	RIM=
RCP	REINFORCED CONCRETE PIPE
TC=	TOP OF CURB=
TRANS	TRANSFORMER
V	VENT
WF	WOOD FENCE
WG	WATER GATE
WV	WATER VALVE
10" T	10" TREE

EXISTING

	EXISTING CHAIN LINK FENCE
	EXISTING WATER LINE
	EXISTING WETLANDS LINE
	EXISTING 100' WETLANDS BUFFER
	EXISTING ELECTRICAL LINE
	EXISTING GAS LINE
	EDGE OF WATER
	PROPERTY BOUNDARY/ EASEMENT
	RAILROAD TRACK
	EXISTING 2.5' CONTOURS
	EXISTING 0.5' CONTOURS
	UTILITY POLE
	LIGHT POLE
	BURIED WATER GATE VALVE
	WETLAND FLAG
	TRAFFIC SIGNAL
	FIRE HYDRANT
	X" TREE
	TREE LINE
	STRUCTURE
	TEST PIT

PROPOSED

	PROPOSED GRADING
	PROPOSED SPOT ELEVATION
	PROPOSED UNDERDRAIN
	SURFACE RUNOFF FLOW DIRECTION
	LIMIT OF DISTURBANCE
	BARRIER FENCE
	SILT FENCE
	PROPOSED WATER LINE ROUTE
	PROPOSED 4' TALL CHAIN LINK FENCE
	PROPOSED 4' TALL WOOD AND WIRE MESH FENCE
	PROPOSED WATER VALVE
	PROPOSED WATER LINE TEE
	PROPOSED YARD INLET
	PROPOSED DRAINAGE PIPE
	PROPOSED FLARED END SECTION
	PROPOSED RIPRAP APRON
	PROPOSED BIORETENTION MEDIA
	PROPOSED PAVEMENT
	PROPOSED COMPACTED STONE DUST
	DEMOLITION

SOILS LEGEND

654:	UDORTHENTS, LOAMY
621B:	SCIO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES

75%

SCALE VERIFICATION
THIS BAR IS 1 INCH IN LENGTH
ON ORIGINAL DRAWING

IF IT'S NOT 1 INCH ON THIS
SHEET ADJUST YOUR
SCALES ACCORDINGLY
ORIGINAL DRAWING SIZE IS 22 x 34



FRANCIS MCPARTLAN, P.E.
PROFESSIONAL ENGINEER
MA LIC. NO. 49572

SIGNATURE

DATE

Scale AS NOTED

Date OCTOBER 2015

Job No. 20150056.005A

Designed by BJF

Drawn by ELD

Checked by FM

Approved by FM

No.

Description

Date

REVISIONS



CITY OF CAMBRIDGE
WATER DEPARTMENT

Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

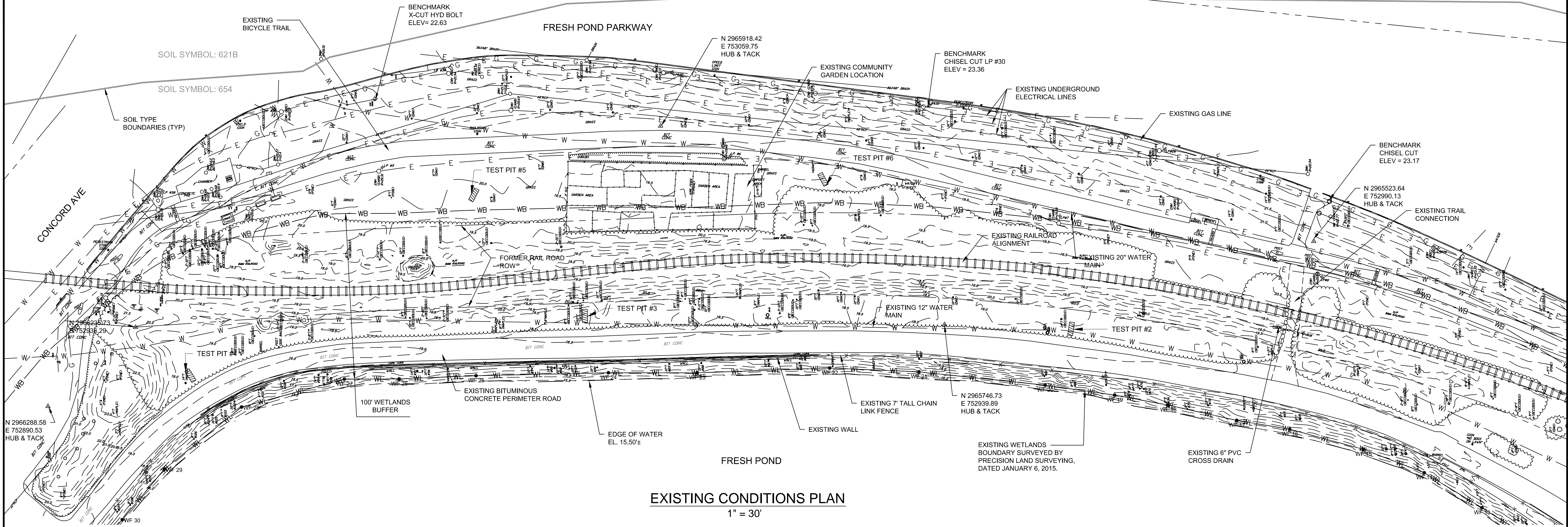
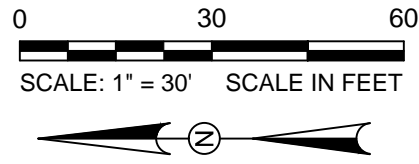
Drawing

GENERAL NOTES, LEGEND AND ABBREVIATIONS

Sheet

C-1

File No.



75%

SCALE VERIFICATION
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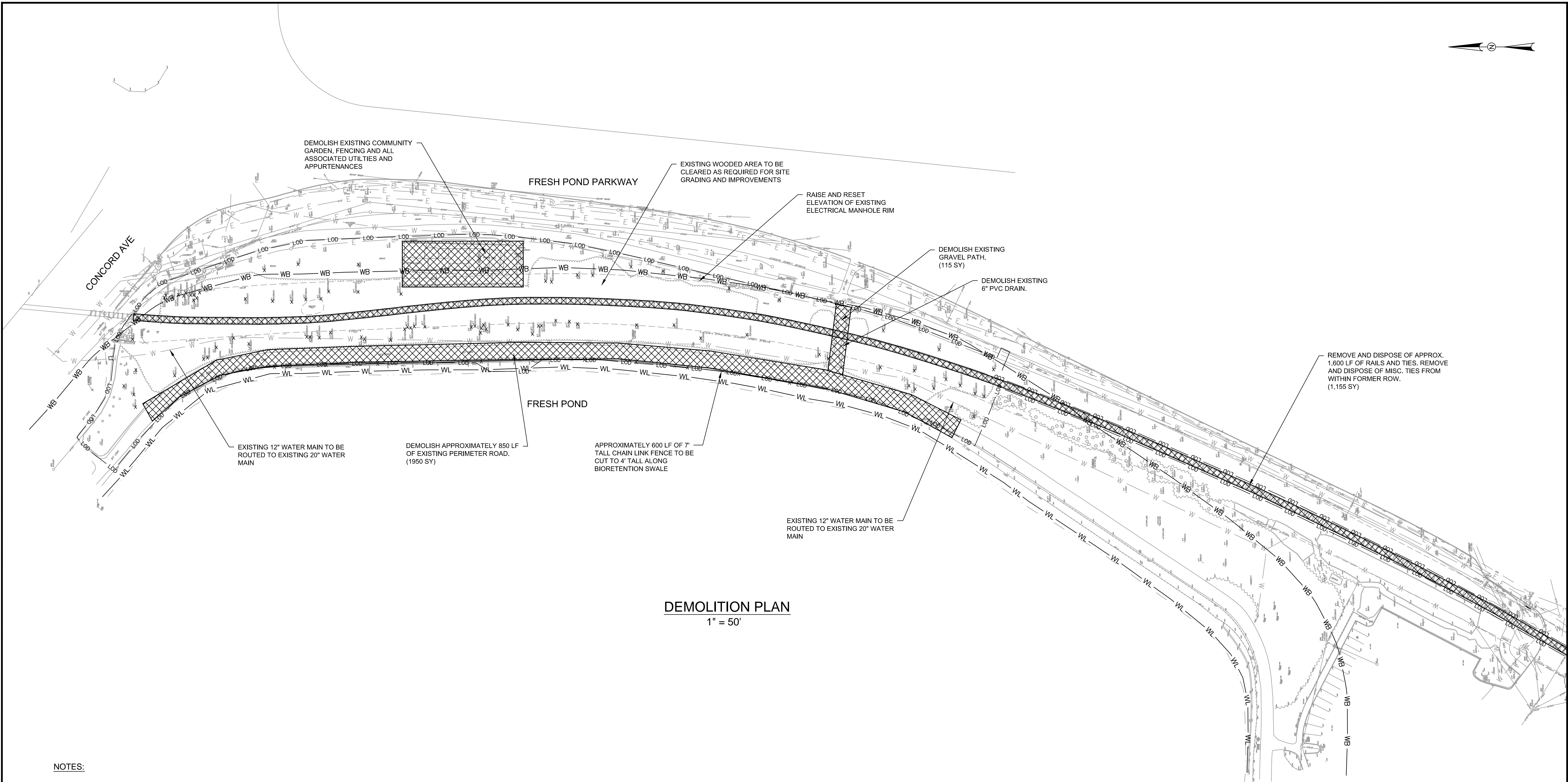
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Approved by	FM		REVISIONS		



Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	C-2
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS	File No.	
Drawing	EXISTING CONDITIONS PLAN		

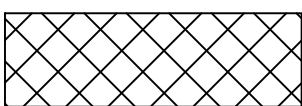
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NOTES:

1. LOCATIONS OF EXISTING PIPING AND UNDERGROUND FACILITIES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATIONS AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING BELOW GRADE UTILITIES AND PIPING AT NO EXTRA COST TO OWNER. ELEVATION AND DIRECTION OF NEW PIPING ARE SHOWN FOR THE PURPOSE OF INDICATING THE BASIC PARAMETERS USED DURING DESIGN. THE CONTRACTOR SHALL PERFORM TEST PITS AT ALL POINTS OF CONNECTION TO EXISTING PIPING/UTILITIES AND AT ALL PIPING/UTILITY CROSSINGS, AND AS REQUIRED IN ORDER TO DETERMINE THE EXACT LOCATION OF EXISTING PIPES. CONTRACTOR SHALL ALSO MAKE ALL REQUIRED FIELD MEASUREMENTS TO VERIFY EXISTING AND CONTRACT INTERFACE DIMENSIONS, LOCATIONS, AND OTHER CONDITIONS.
2. EROSION CONTROLS TO BE INSTALLED AND INSPECTED BY OWNER PRIOR TO ANY DEMOLITION.
3. SHADING INDICATES THE APPROXIMATE LIMITS OF THE REMOVAL OF EXISTING STRUCTURES AND FACILITIES. THE EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD AS NEEDED TO ACCOMMODATE THE PROPOSED IMPROVEMENTS.
4. DEMOLITION WORK SHALL BE COORDINATED WITH OWNER IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SPECIFICATION SECTION 02051.

LEGEND:



X

FACILITIES/STRUCTURES TO BE DEMOLISHED

TREES TO BE DEMOLISHED



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Description

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Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

Drawing

DEMOLITION PLAN

75%

SCALE VERIFICATION
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ON ORIGINAL DRAWING

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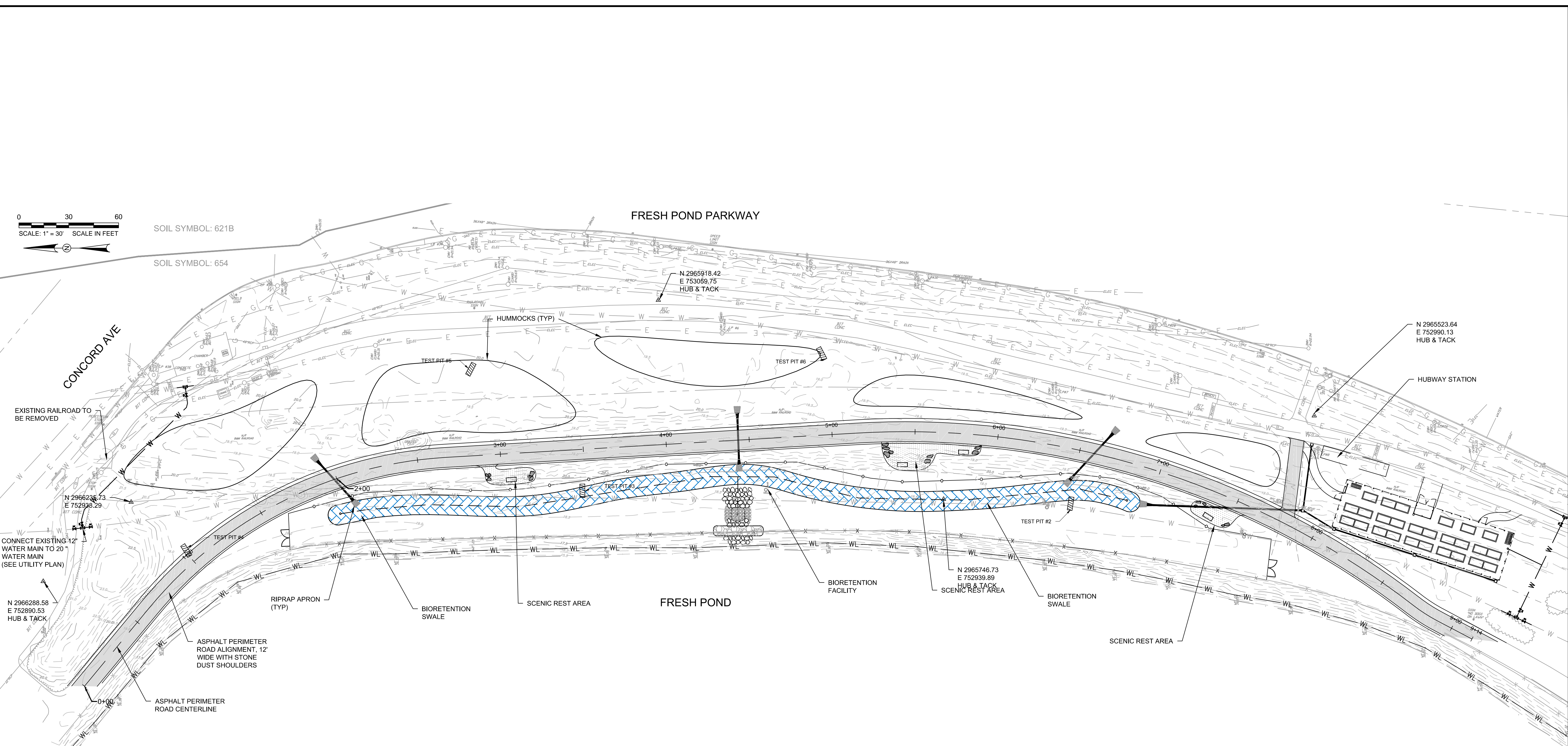
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SCALES ACCORDINGLY
ORIGINAL DRAWING SIZE IS 22 x 34

0 50 100
SCALE: 1" = 50' SCALE IN FEET

Sheet

C-3

File No.



LAYOUT PLAN
1" = 30'

75%

SCALE VERIFICATION
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ON ORIGINAL DRAWING
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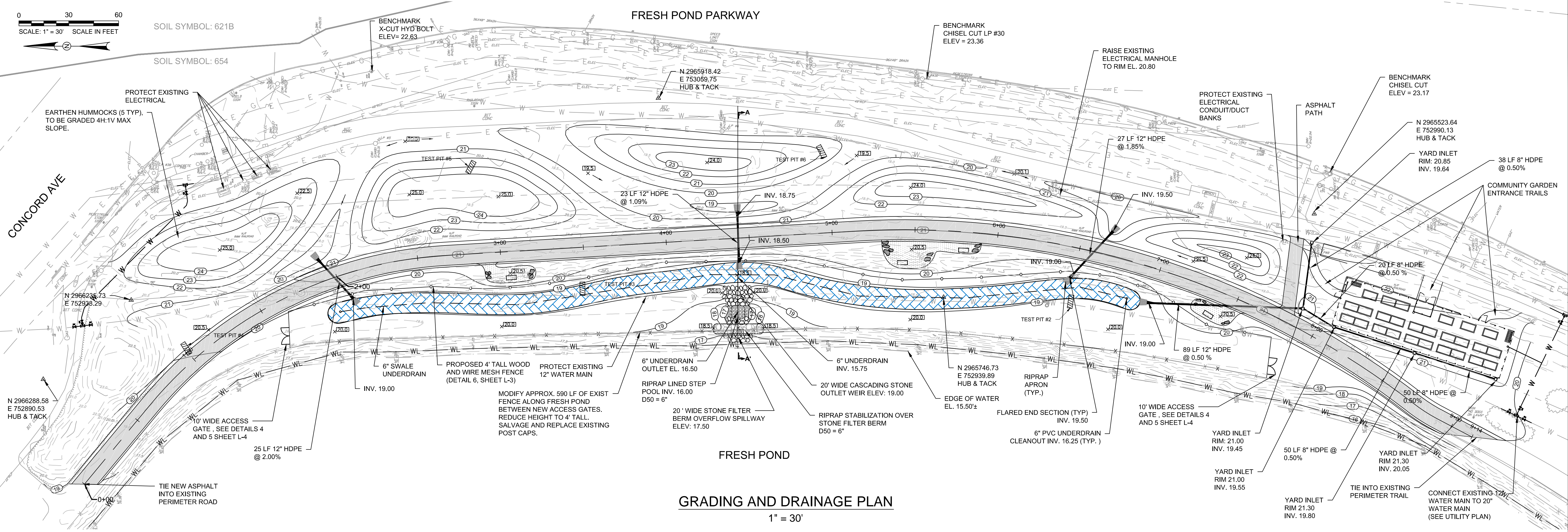
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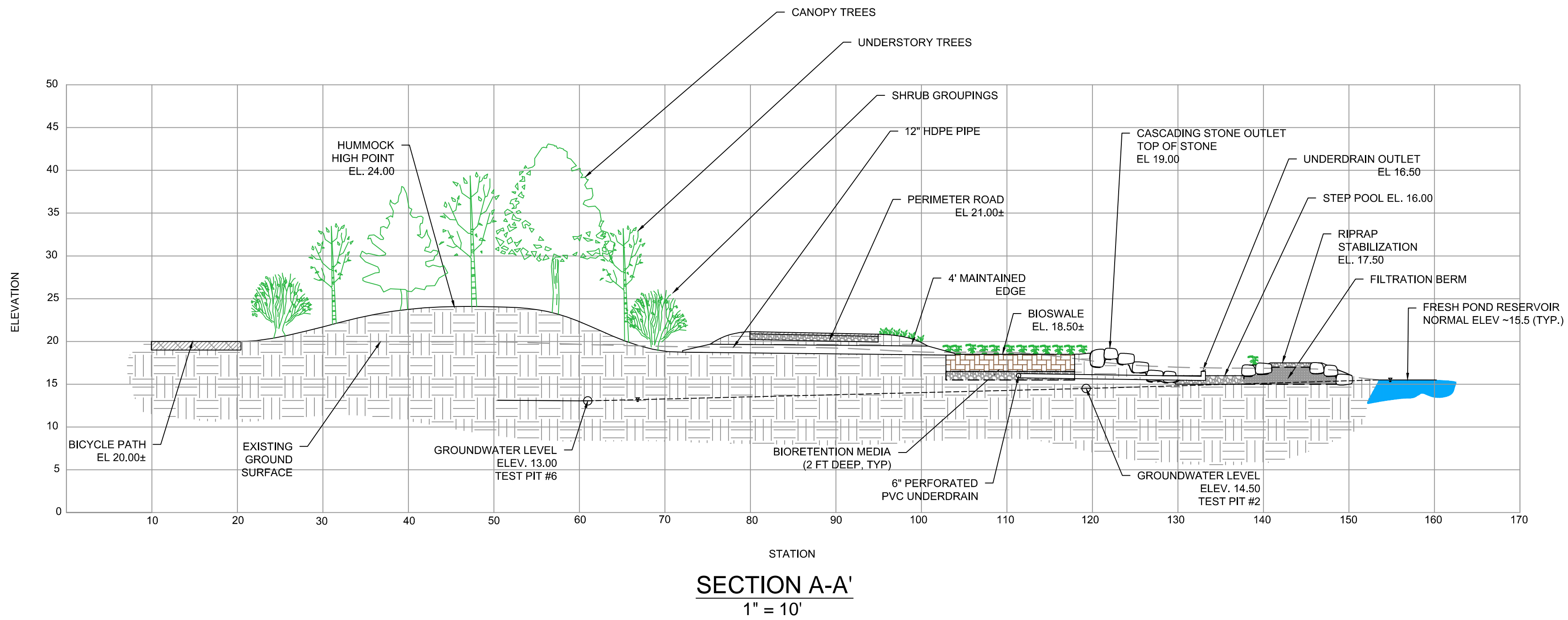
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS
Drawing	LAYOUT PLAN

Sheet	C-4
File No.	



GRADING AND DRAINAGE PLAN

1" = 30'



75%

SCALE VERIFICATION
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0 1"
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Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

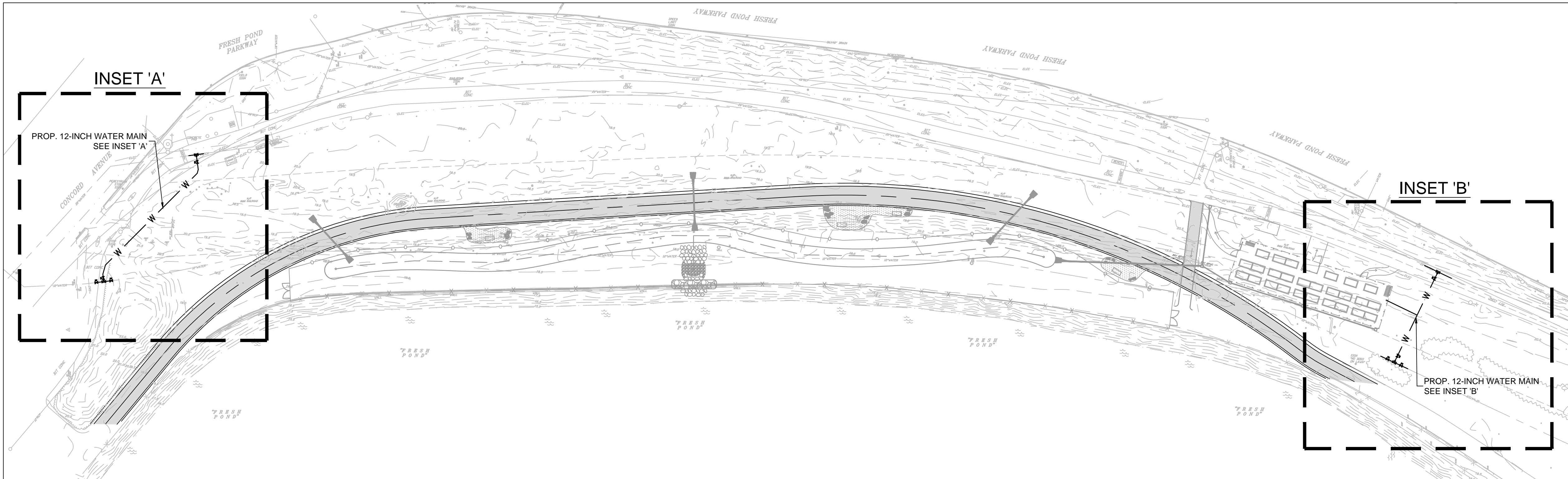
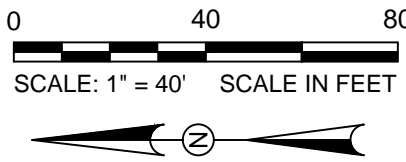
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GRADING AND DRAINAGE PLAN AND PROFILE

Sheet

C-5

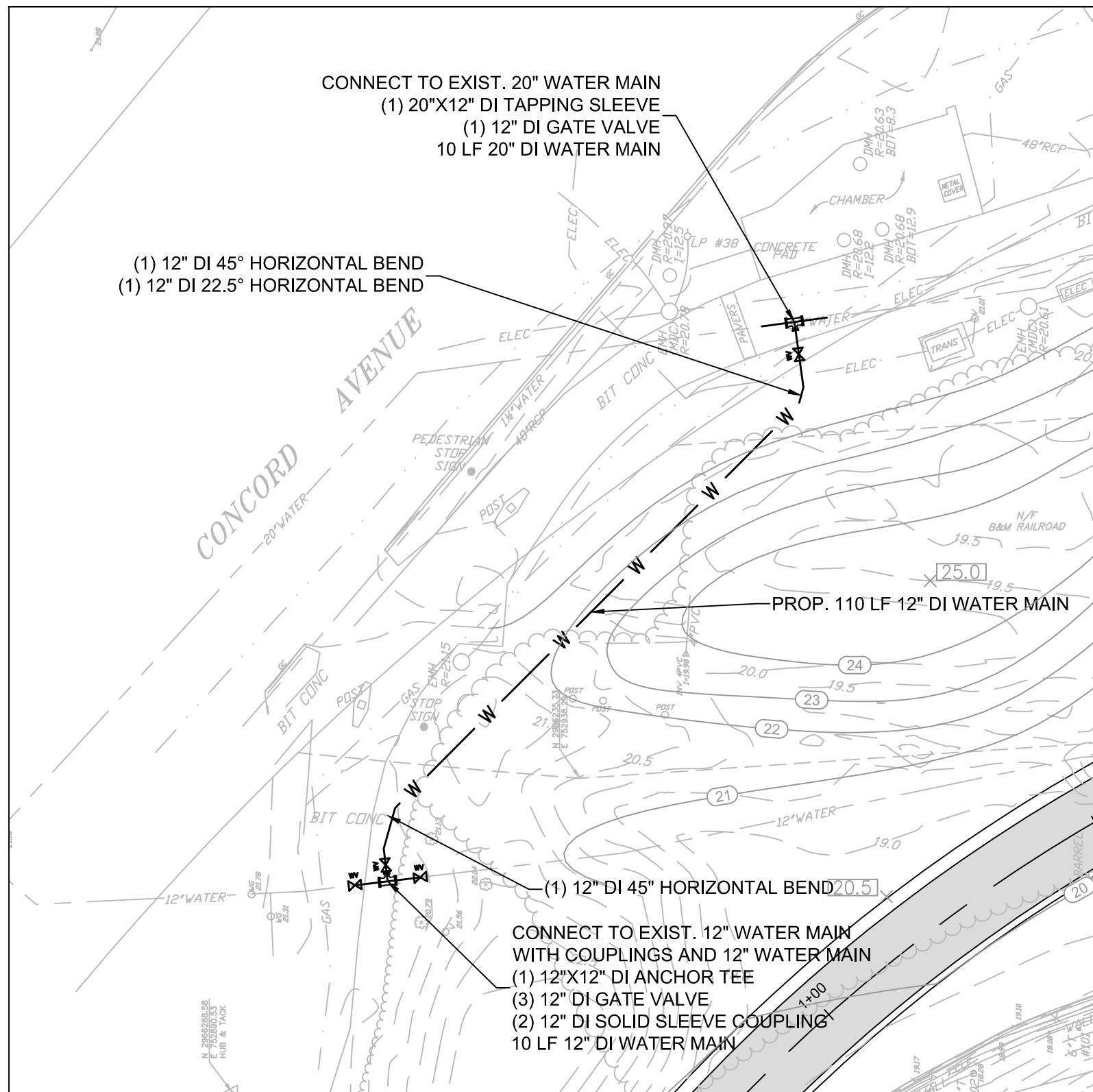
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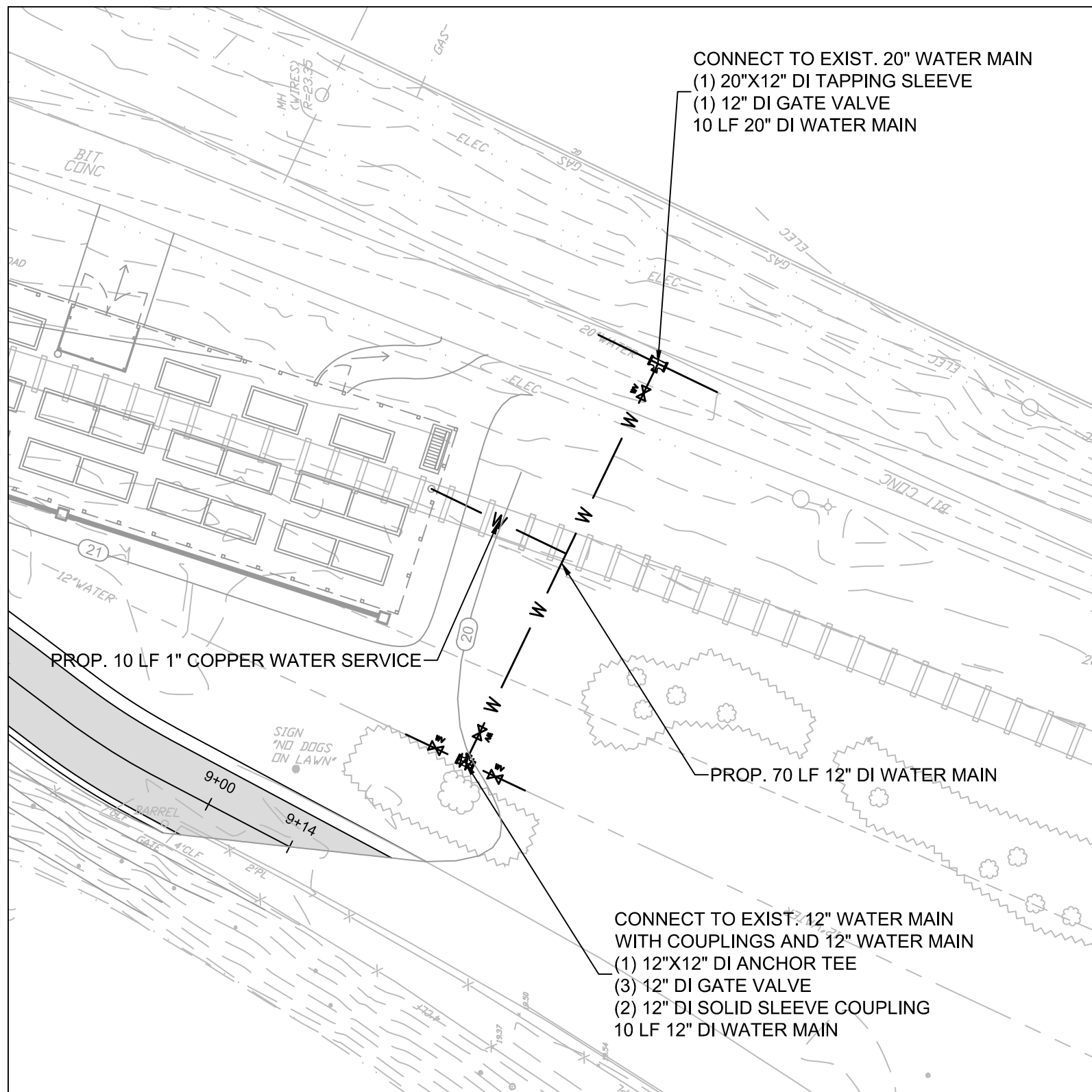
PLAN VIEW
1" = 40'

NOTES:

- UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER. WHERE PROVIDED, WATER MAIN ELEVATIONS REFER TO TOP OF WATER MAIN
- CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
- WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING RESTORATION WORK.
- ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
- AT ALL LOCATIONS WHERE STEEL GAS MAINS ARE ENCOUNTERED, THERE IS THE POTENTIAL OF ASBESTOS FIBERS WITHIN THE COAL-TAR WRAP. WHERE IT IS REQUIRED TO REMOVE THESE ABANDONED SECTIONS, CONTRACTOR WILL BE REQUIRED TO REMOVE THE SECTIONS WITH THE USE OF HAND TOOLS AND PLACE IN LINED ROLL OFF BINS PROVIDED BY NSTAR GAS. CONTRACTOR TO COORDINATE WITH NSTAR GAS ON THE DISPOSAL OF THE PIPE. NSTAR GAS WILL BE RESPONSIBLE FOR DISPOSAL OF THE REMOVED SECTIONS.
- CONTRACTOR TO CONDUCT TEST PITS AT LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS OR AS OTHERWISE REQUIRED BY THE ENGINEER. WHERE CONTRACTOR IS REQUIRED TO VERIFY CLEARANCE BETWEEN UTILITIES, AND IF REQUIRED CLEARANCE CANNOT BE OBTAINED, CONTRACTOR SHALL COORDINATE RELOCATION WITH UTILITY COMPANIES.



INSET 'A'
1" = 20'



INSET 'B'
1" = 20'

75%

SCALE VERIFICATION
THIS BAR IS 1 INCH IN LENGTH
ON ORIGINAL DRAWING

0 1"

IF IT'S NOT 1 INCH ON THIS
SHEET ADJUST YOUR
SCALES ACCORDINGLY
ORIGINAL DRAWING SIZE IS 22 x 34



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Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

Drawing

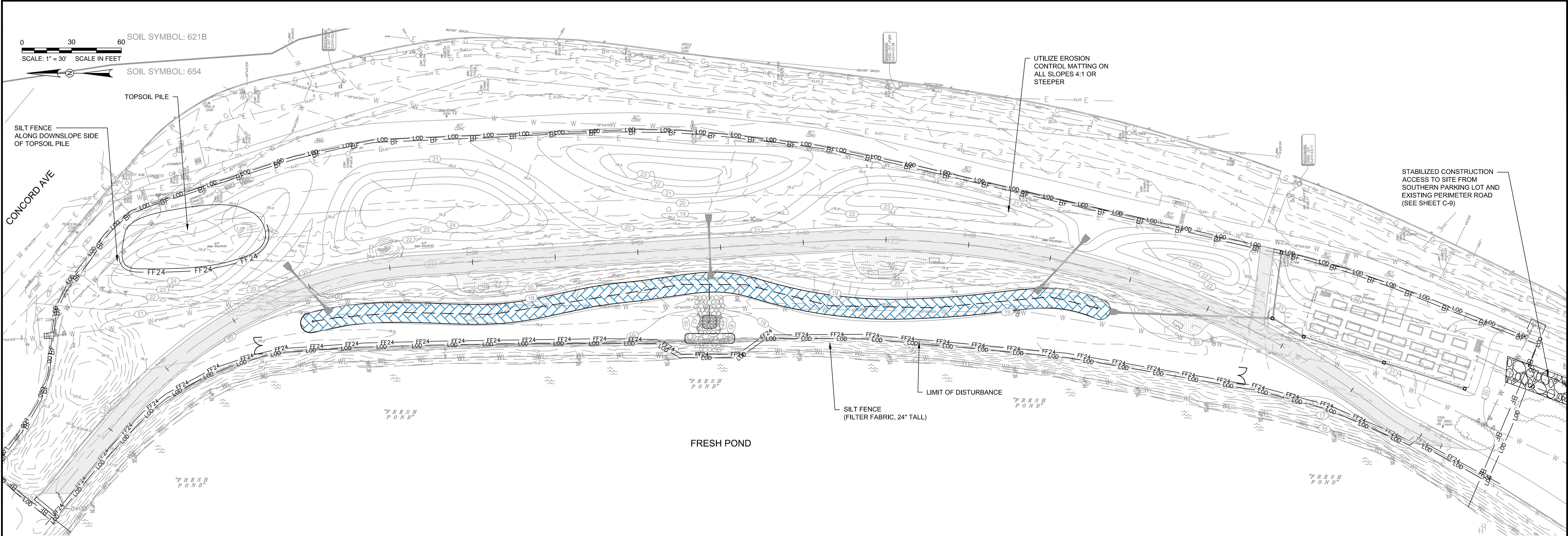
UTILITY PLAN

Sheet

C-6

File No.

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SOIL EROSION AND SEDIMENT CONTROL PLAN
1" = 30'

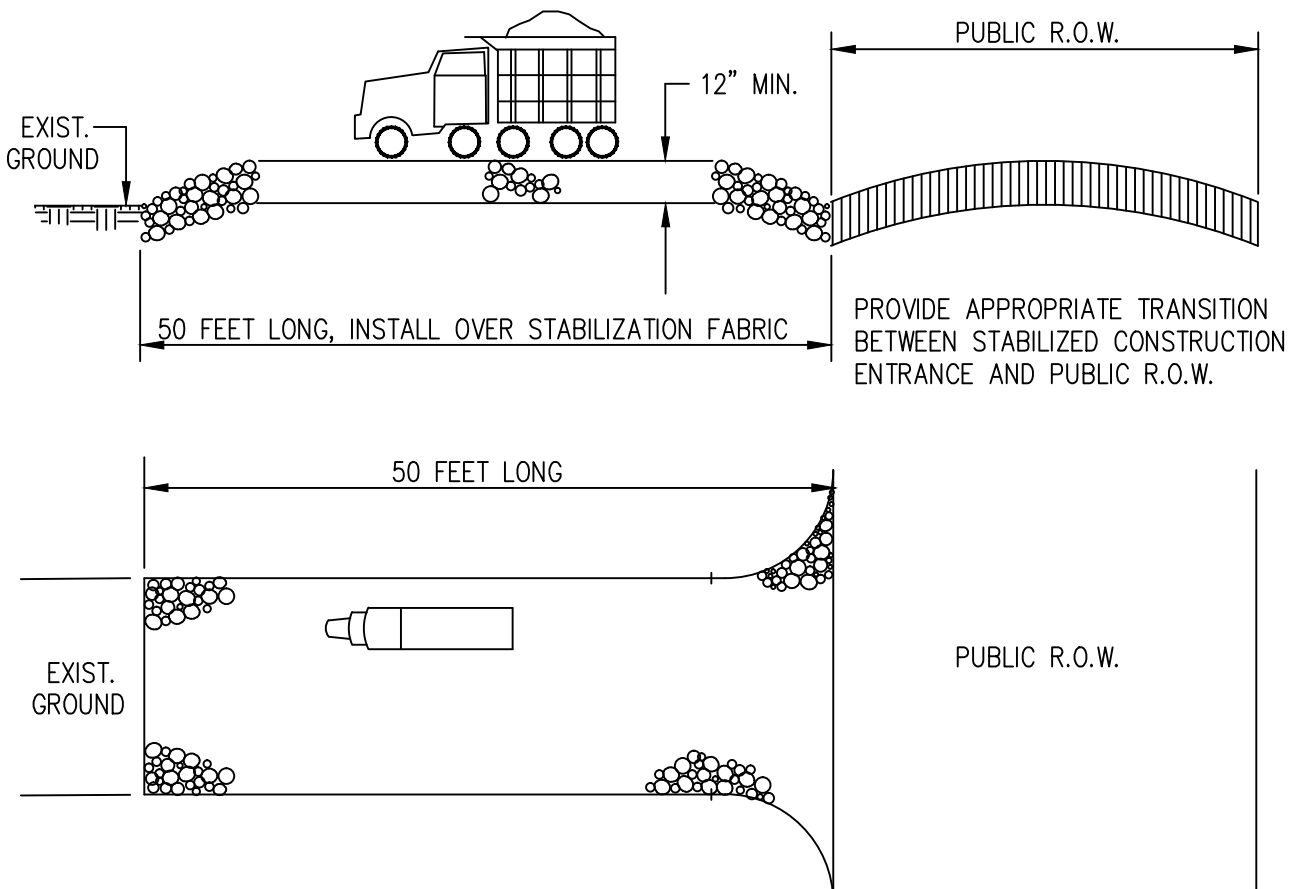
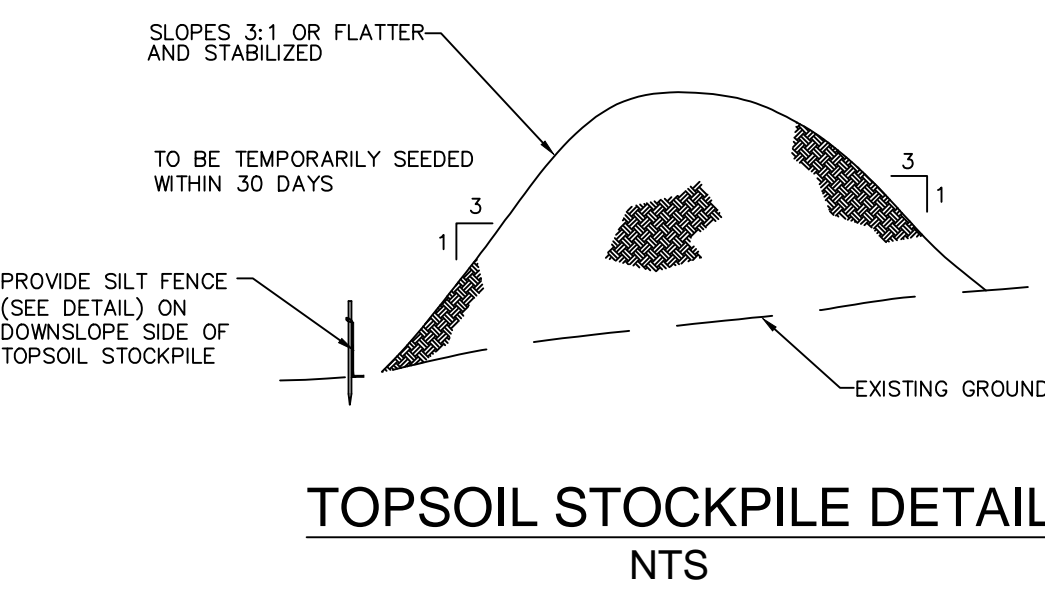


TABLE 29-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS

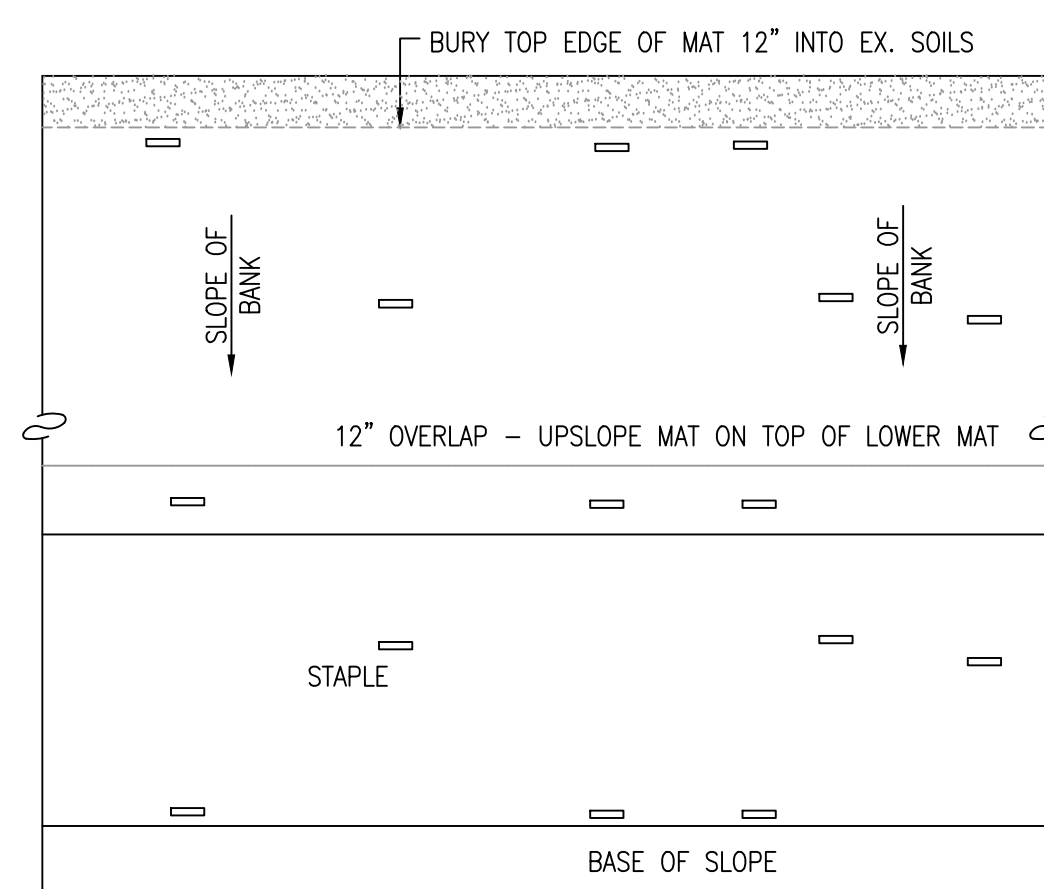
PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
>5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE	

1. As prescribed by local ordinance or other governing authority.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NTS



TOPSOIL STOCKPILE DETAIL
NTS



EROSION CONTROL MATTING DETAIL (TYP)
NTS

- NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS.
 2. INSTALL EROSION CONTROL MATTING PER MANUFACTURER RECOMMENDATIONS
 3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS
 4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
 5. INSTALL EROSION CONTROL MATTING ON ALL SLOPES 4:1 OR STEEPER, INCLUDING BIORETENTION FACILITY SIDE SLOPES AND HUMMOCKS SLOPES)

75%

SCALE VERIFICATION
THIS BAR IS 1 INCH IN LENGTH
ON ORIGINAL DRAWING
0 1"
IF IT'S NOT 1 INCH ON THIS
SHEET ADJUST YOUR
SCALES ACCORDINGLY
ORIGINAL DRAWING SIZE IS 22 x 34



FRANCIS MCPARTLAN, P.E.
PROFESSIONAL ENGINEER
MA LIC. NO. 49572

SIGNATURE DATE

Scale	AS NOTED			
Date	OCTOBER 2015			
Job No.	20150056.005A			
Designed by	BJF			
Drawn by	ELD			
Checked by	FM	No.	Description	Date
Approved by	FM		REVISIONS	



Client
CITY OF CAMBRIDGE, MASSACHUSETTS

Project
FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

Drawing
SOIL EROSION & SEDIMENT CONTROL PLAN AND DETAILS

Sheet
C-7

File No.

GENERAL

1. ALL DISTURBED AREAS THAT ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED TO BE PERMANENTLY SEEDED WITHIN 30 WORKING DAYS MUST BE TEMPORARILY STABILIZED AS PER SPECIFICATIONS BELOW.
2. ALL EXPOSED AREAS WHICH ARE TO BE PERMANENTLY VEGETATED, ARE TO BE SEEDED AND MULCHED WITHIN 10 DAYS OF FINAL GRADING.
3. STRAW MULCH IS TO BE APPLIED TO ALL SEEDINGS AT A RATE OF 1–1/2 TO 2 TONS PER ACRE (APPROX. 100 TO 130 BALES PER ACRE).
4. MULCH ANCHORING IS REQUIRED AFTER MULCHING TO MINIMIZE LOSS BY WIND OR WATER. THIS IS TO BE DONE USING ONE OF THE METHODS (CRIMPING, LIQUID MULCH BINDERS, NETTINGS, ETC.) IN THE “MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS”.
5. EXISTING WEEDY AND POORLY–VEGETATED AREAS WITH LESS THAN 80 PERCENT PERENNIAL GRASS COVER MUST RECEIVE PERMANENT STABILIZATION.
6. ALL BAGS NEED TO BE SAVED FOR LIME, FERTILIZER, SEED, AND LIQUID MULCH BINDER (IF MULCH ANCHORING METHOD). SUCH PROOFS NEED TO BE SUBMITTED TO THE DISTRICT INSPECTOR FOR VERIFICATION OF MATERIALS AND QUANTITIES USED FOR ALL SEEDINGS.

SEED–BED PREPARATION FOR ALL SEEDINGS

SUB–SOIL PREPERATION: IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SURFACE SHOULD BE SCARIFIED TO A DEPTH OF 6” TO 12” WHERE THERE HAS BEEN SOIL COMPACTION (E.G. AREAS OF HEAVY CONSTRUCTION TRAFFIC). THIS PRACTICE IS TO BE APPLIED TO ALL COMPACTED AREAS WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

TOPSOILING: AREAS TO BE SEEDED SHOULD HAVE A MINIMUM OF 5” OF FRIABLE, LOAMY, TOPSOIL FREE OF OBJECTIONABLE WEEDS, STONES AND DEBRIS.

FINAL GRADING: GRADING IS TO BE SMOOTH OF RUTS AND FREE OF OBJECTIONABLE STONES, DEPRESSIONS, VEHICLE TRACKS, AND ROUGH EDGES. THERE IS TO BE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND DWELLINGS. REFUSE FROM SEEDBED PREPARATION (ROOTS, STICKS, STONES, CONSTRUCTION DEBRIS) MUST BE DISPOSED OF PROPERLY.

LIMING/FERTILIZING: APPLY LIMESTONE AND FERTILIZER TO SOIL TEST AND CURRENT EXTENSION SERVICE RECOMMENDATIONS. IN ABSENCE OF A SOIL TEST, APPLY AS FOLLOWS:

PERMANENT SEEDING:

A. APPLY LIME (A PH OF 5.5–6.0 IS DESIRED) A A RATE OF 2.5 TONS PER ACRE AND 10–20–20 ANALYSIS FERTILIZER AT A RATE OF 500 POUNDS PER ACRE (40% OF N TO BE IN AN ORGANIC SLOW RELEASE FORM).

B. LIME AND FERTILIZER ARE TO BE WORKED INTO THE TOP 2–3 INCHES OF SOIL.

TEMPORARY SEEDING:

A. APPLY LIME (A PH OF 5.5–6.0 IS DESIRED) A A RATE OF 2.0 TONS PER ACRE AND 10–10–10 ANALYSIS FERTILIZER AT A RATE OF 400 POUNDS PER ACRE (40% OF N TO BE IN AN ORGANIC SLOW RELEASE FORM).

B. LIME AND FERTILIZER ARE TO BE WORKED INTO THE TOP 4 INCHES OF SOIL.

TEMPORARY STABILIZAITON WITH MULCH ONLY

STRAW MULCH IS TO BE SPREAD UNIFORMLY AT THE RATE OF 2 TO 2–1/2 TONS PER ACRE (TOTAL GROUND SURFACE COVERAGE). THIS PRACTICE IS LIMITED TO PERIODS WHEN VEGETATIVE COVER CANNOT BE ESTABLISHED DUE TO THE SEASON OR OTHER CONDITIONS. MULCH MUST BE ANCHORED IN ACCORDANCE WITH NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. MULCH ALONE CAN ONLY BE USED FOR SHORT PERIODS AND WILL REQUIRE MAINTENANCE AND RENEWAL. OTHER MULCH MATERIALS MAY BE UTILIZED IF APPROVED BY THE DISTRICT.

TEMPORARY SEEDING

TEMPORARY SEEDING IS TO BE USED ON ALL DISTURBED AREAS WHERE PERMANENT STABILIZATION WILL NOT BE ACCOMPLISHED FOR A PERIOD OF UP TO 6 MONTHS.

PRODUCT	RATE	RECOMMENDED OPTIMUM SEEDING DATES
---------	------	-----------------------------------

PERENNIAL RYEGRASS	100 LBS. PER ACRE	3/15–5/15 & 8/15–10/1
SPRING OATS	86 LBS. PER ACRE	3/15–6/1 & 8/1–10/1
WINTER CEREAL RYE	112 LBS. PER ACRE	8/1–11/15
WINTER BARLEY	96 LBS. PER ACRE	8/15–10/1
PEARL MILLET	20 LBS. PER ACRE	5/15–8/15
GERMAN OR HUNGARIAN MILLET	30 LBS. PER ACRE	5/15–8/15

STABILIZAITON WITH SOD

STABILIZATION WITH SOD IS PERMITTED IN AREAS WHERE MAINTENANCE AND IRRIGATION ARE ADEQUATE TO INSURE PROPER ESTABLISHMENT AND LONGEVITY. SEEDBED PREPARATION IS TO BE CONSISTENT WITH ANY OTHER STABILIZATION REQUIREMENTS. (LIME AND FERTILIZER BAGS ARE TO BE RETAINED FOR DISTRICT INSPECTION.) ON SLOPES GREATER THAN 3 TO 1, SOD MUST BE PROPERLY ANCHORED TO THE SLOPE IN ACCORDANCE WITH THE “MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS”.

PERMANENT SEEDING

A. SEED IS TO BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4”–1/2”.

B. LAWN SEEDINGS ARE TO BE A MIXTURE OF BLUEGRASSES, TURF–TYPE FESCUES, AND TURF–TYPE PERENNIAL RYEGRASSES TO INSURE LONGEVITY, TOLERANCE, AND DURABILITY. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE OF MORE THAN 12 MONTHS OLD UNLESS RETESTED.

C. PROFESSIONAL SEED MIXTURES ARE RECOMMENDED RATHER THAN MIXING SEEDS YOURSELF.

D. SEED MIXTURE (AS SPECIFIED BELOW) IS TO BE APPLIED AT A MINIMUM RATE OF 200 LBS. PER ACRE OF PERENNIAL SEED.

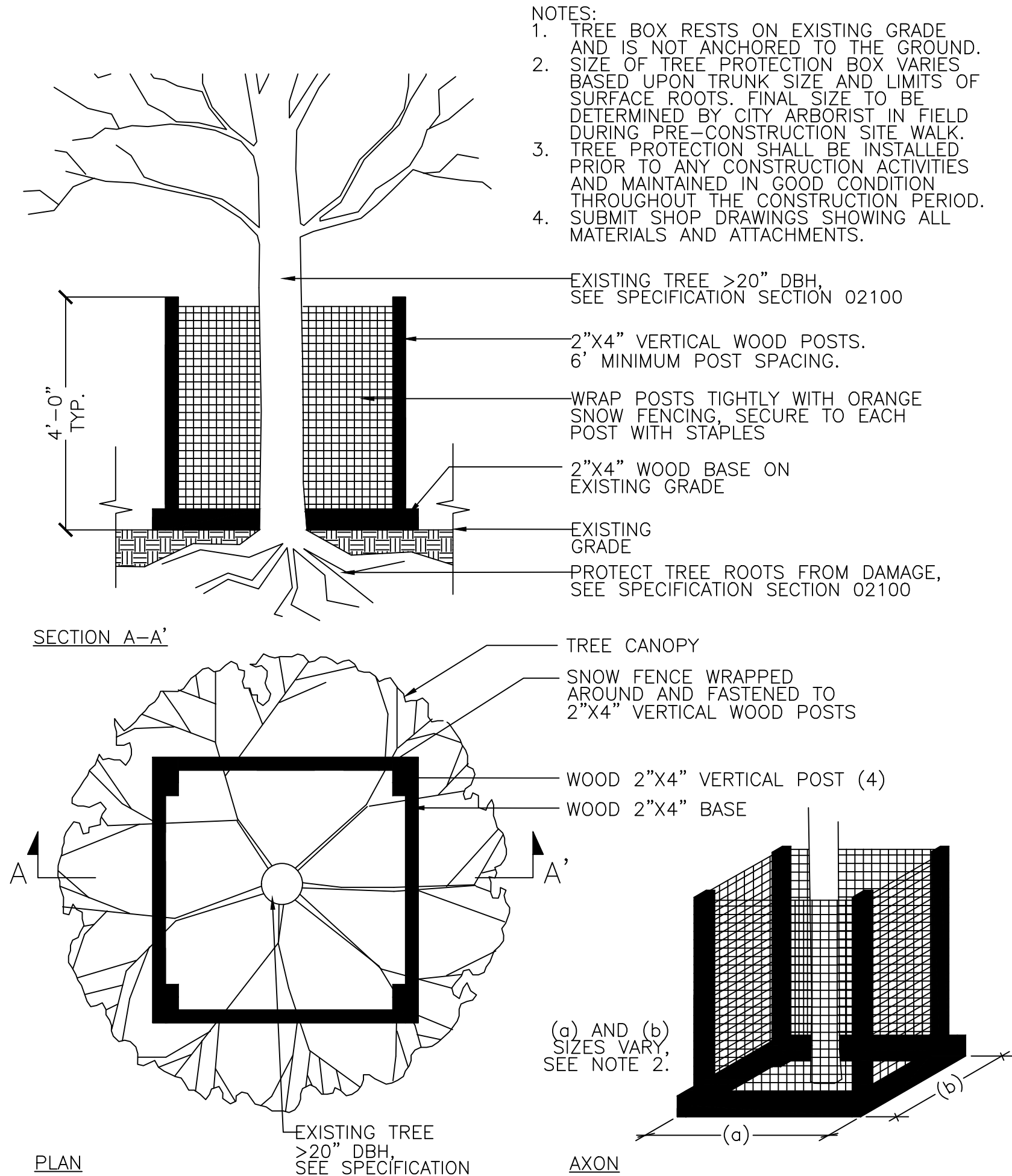
E. OPTIMUM SEEDING PERIOD IS RECOMMENDED TO BE FROM MARCH 1 TO MAY 15 AND AUGUST 15 TO OCTOBER 1. OUTSIDE OF THOSE PERIODS, THE SEEDING RATES ARE TO BE INCREASED BY 50% (I.E.: 300 LBS. PER ACRE OF PERENNIAL SEED INSTEAD OF THE REQUIRED 200 LBS. PER ACRE DURING OPTIMUM PERIODS).

F. SEEDINGS SHOULD RECEIVE AN APPLICATION OF FERTILIZER SUCH AS 10–10–10 OR EQUIVALENT AT 400 LBS. PER ACRE APPROXIMATELY 6 MONTHS AFTER FIRST APPLICATION.

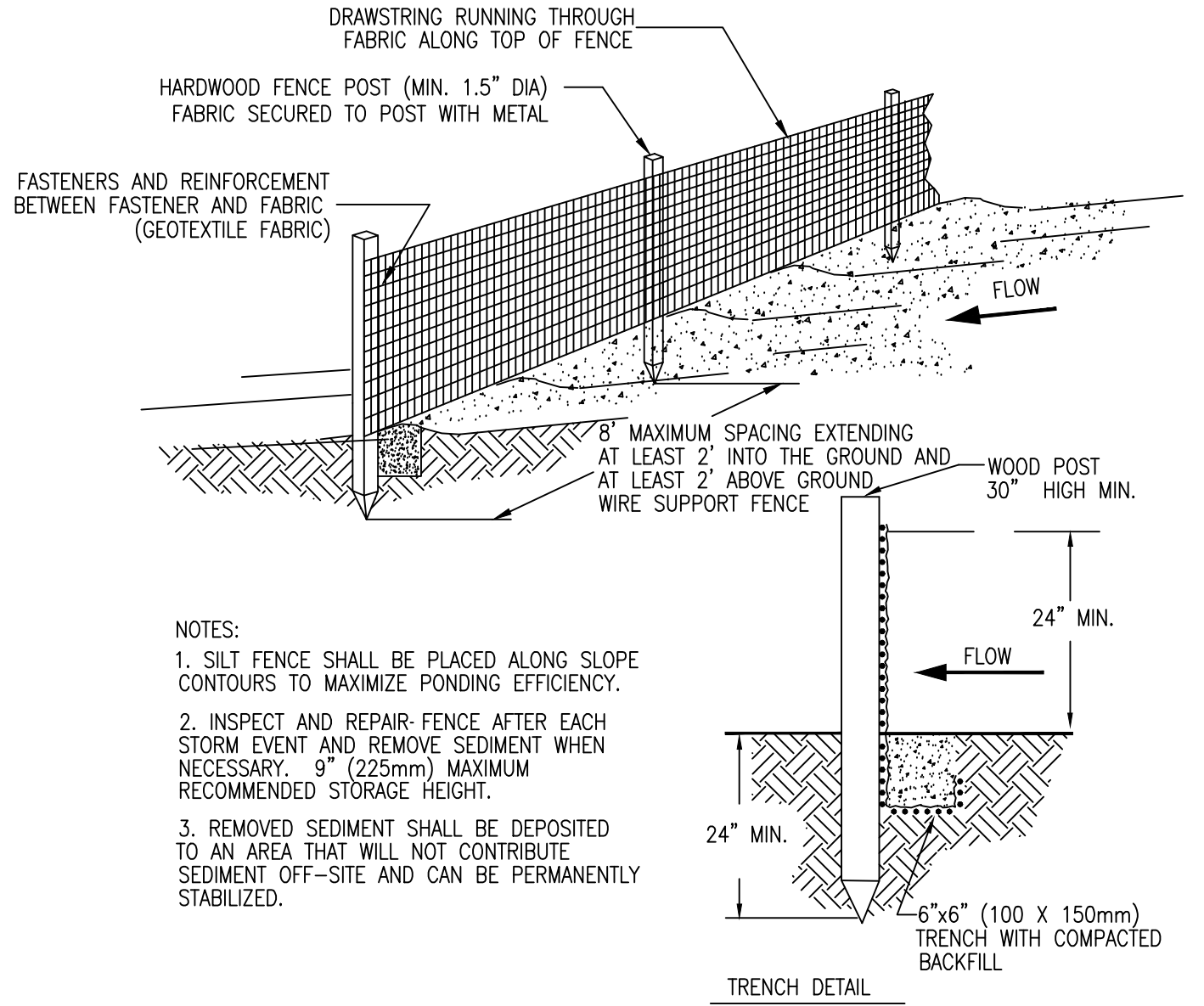
SEEDING MIXTURE FOR GENERAL SEEDING – (EXAMPLE: LAWNS)

70% TURF TYPE TALL FESCUE
20% PERENNIAL RYE GRASS
10% KENTUCKY BLUE GRASS

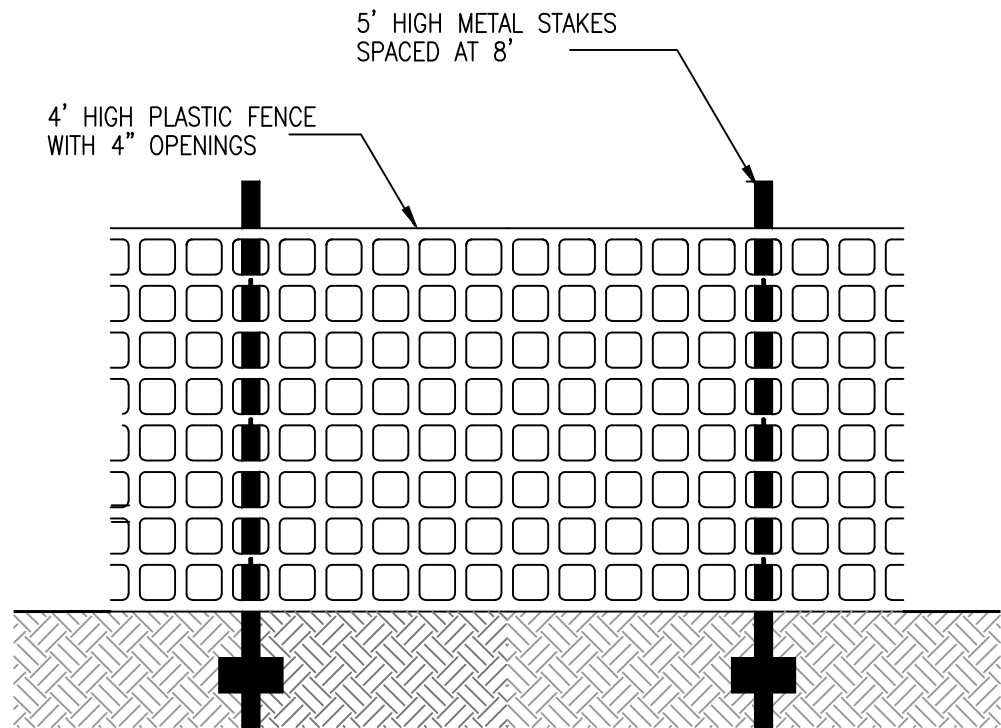
OTHER SEED MIXTURES, SUCH AS BLENDED VARIETIES OF PERENNIAL TURF–TYPE RYEGRASS, TURF–TYPE TALL FESCUES, OR BLUEGRASSES MAY ALSO BE ACCEPTABLE IF APPROVED BY THE ENGINEER AND DISTRICT.



TREE PROTECTION DETAIL
NTS



SILT FENCE DETAILS
NTS



ORANGE BARRIER FENCE DETAIL
NTS

75%

SCALE VERIFICATION
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0 1”

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FRANCIS MCPARTLAN, P.E.
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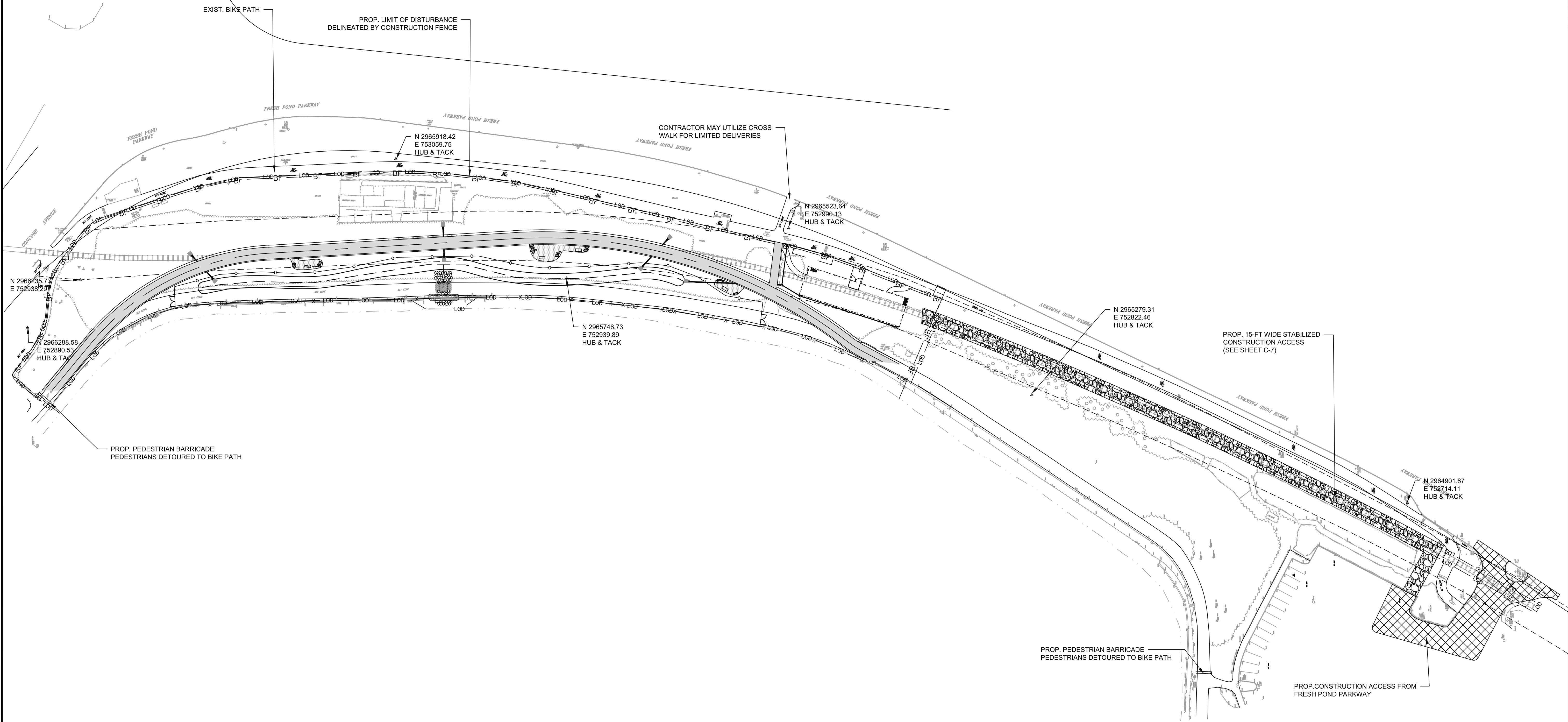
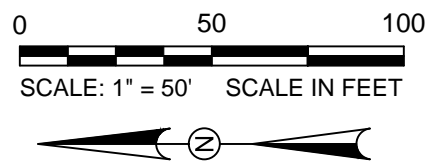
SIGNATURE DATE

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Designed by	BJF				
Drawn by	ELD				
Checked by	FM	No.	Description	Date	
Approved by	FM		REVISIONS		



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS
Drawing	SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS

Sheet	C-8
File No.	



75%

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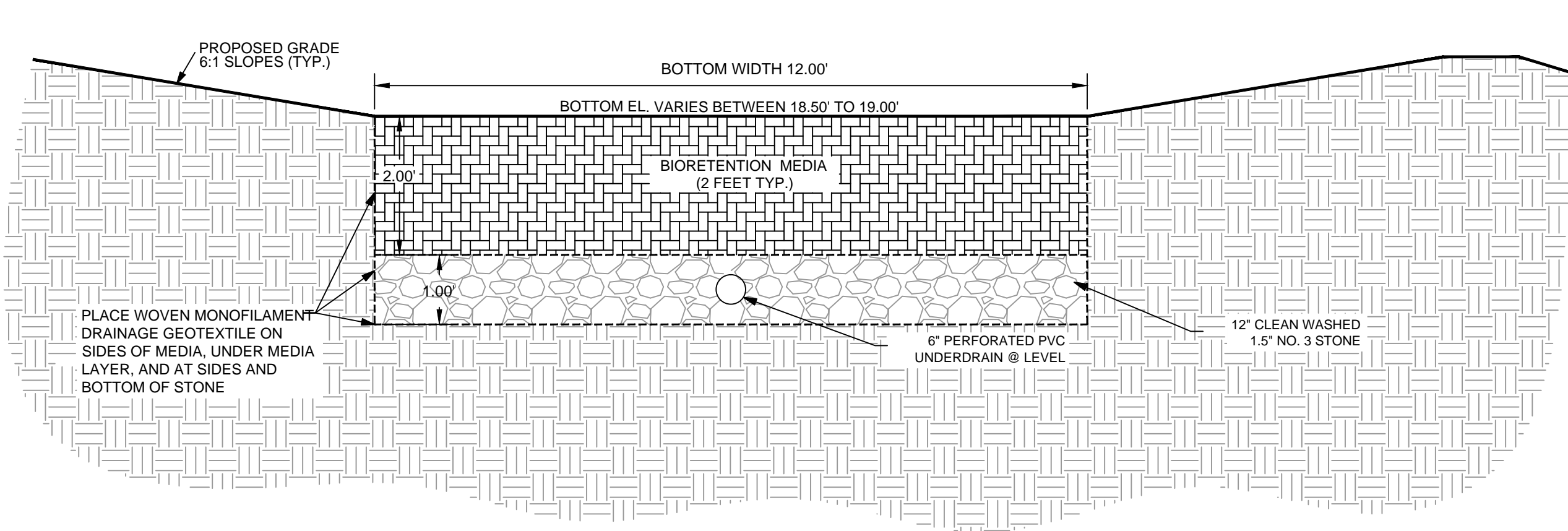
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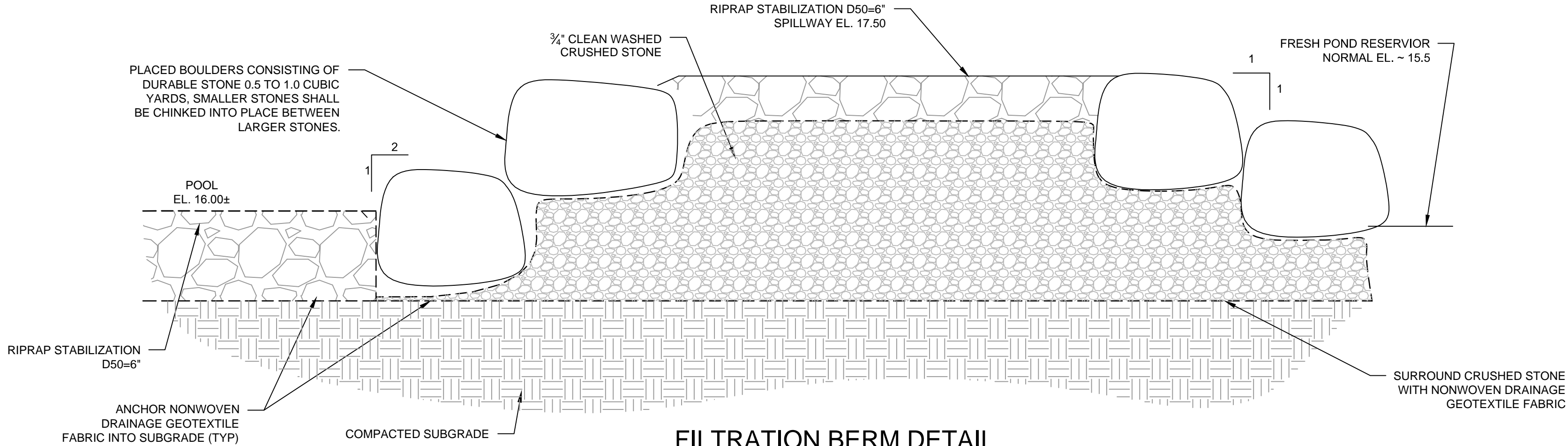
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS
Drawing	PEDESTRIAN MANAGEMENT & CONSTRUCTION ACCESS PLAN

Sheet	C-9
File No.	

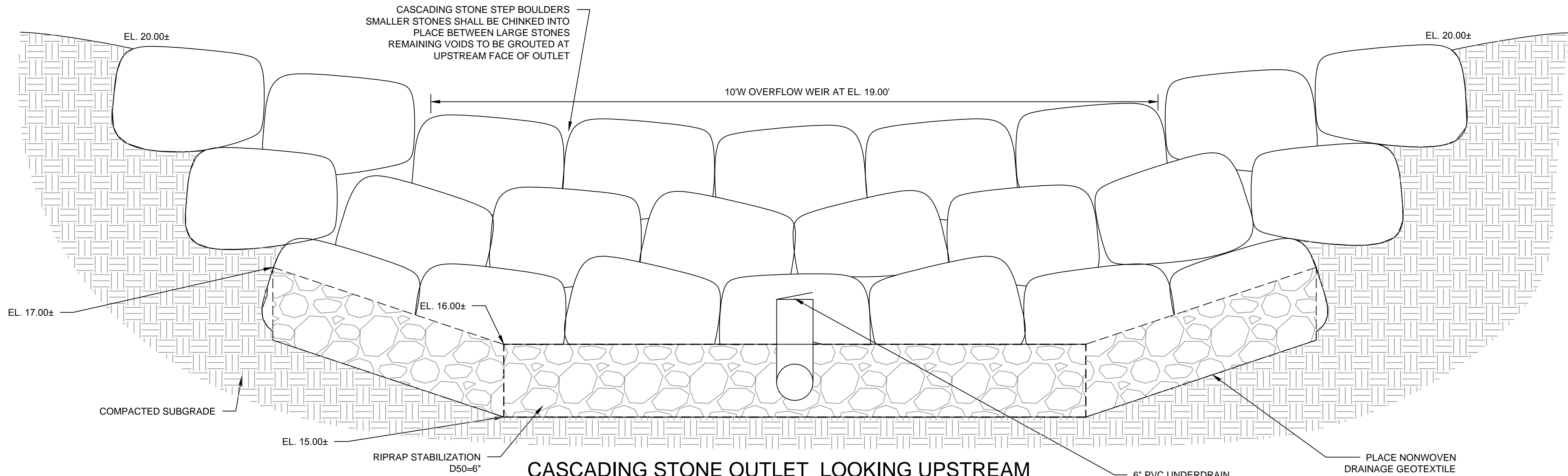
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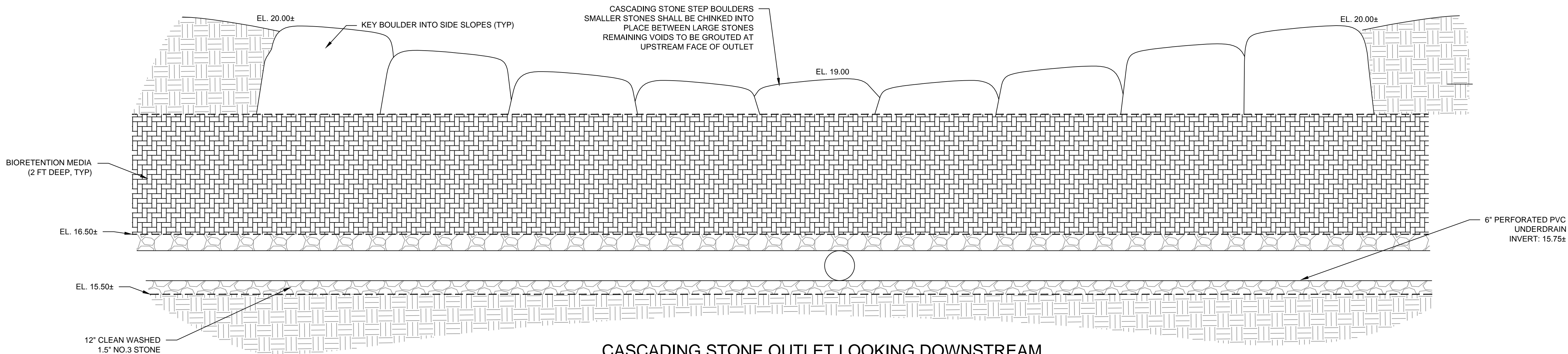
BIORETENTION SWALE SECTION
NTS



FILTRATION BERM DETAIL
SCALE: NTS



CASCADING STONE OUTLET LOOKING UPSTREAM
SCALE: NTS



CASCADING STONE OUTLET LOOKING DOWNSTREAM
SCALE: NTS

75%

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Description

Date

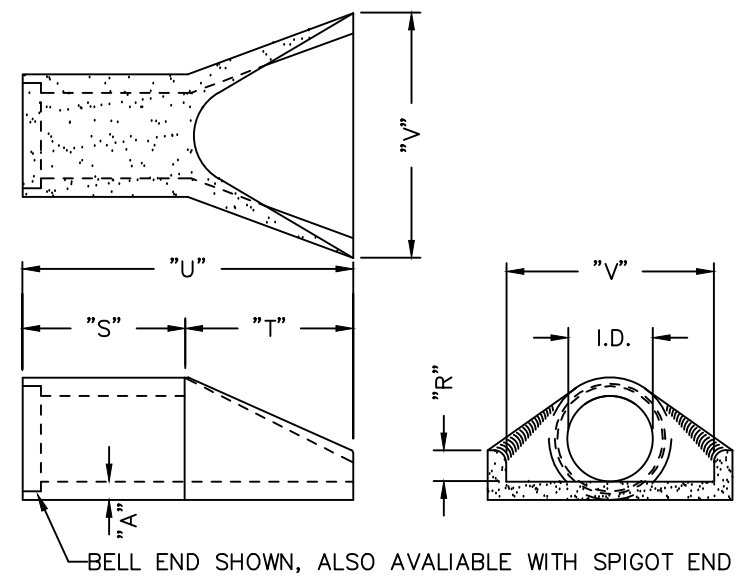
REVISIONS



Client
CITY OF CAMBRIDGE, MASSACHUSETTS
Project
**FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS**
Drawing
CONSTRUCTION DETAILS 1 OF 3

Sheet
C-10
File No.

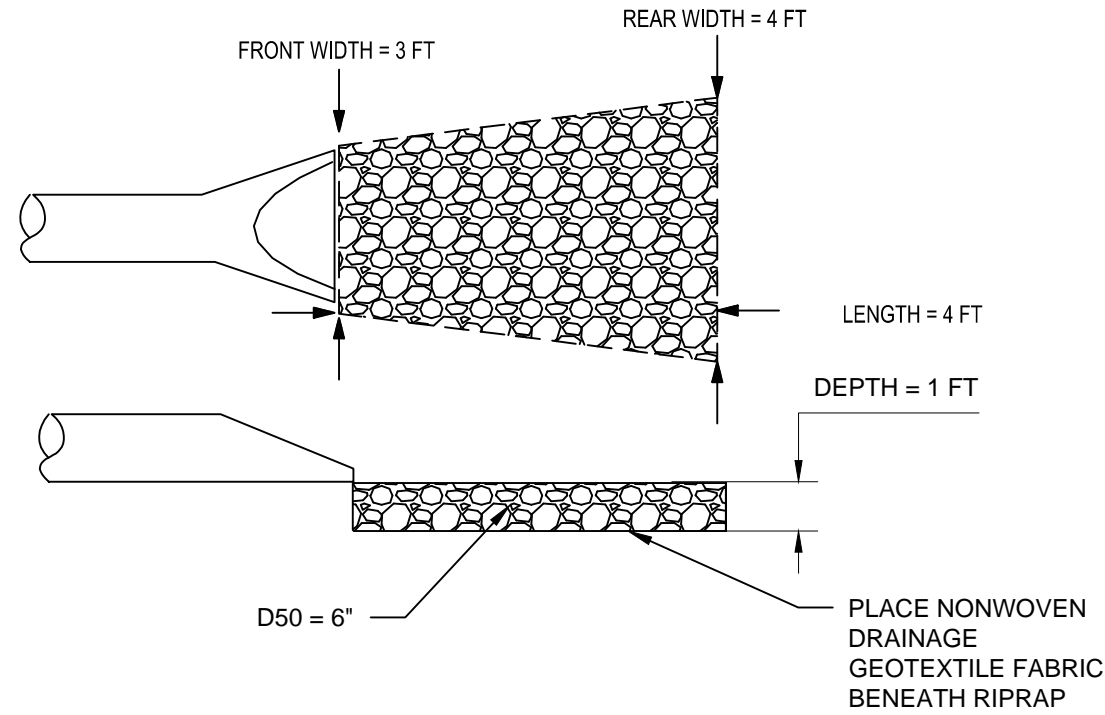
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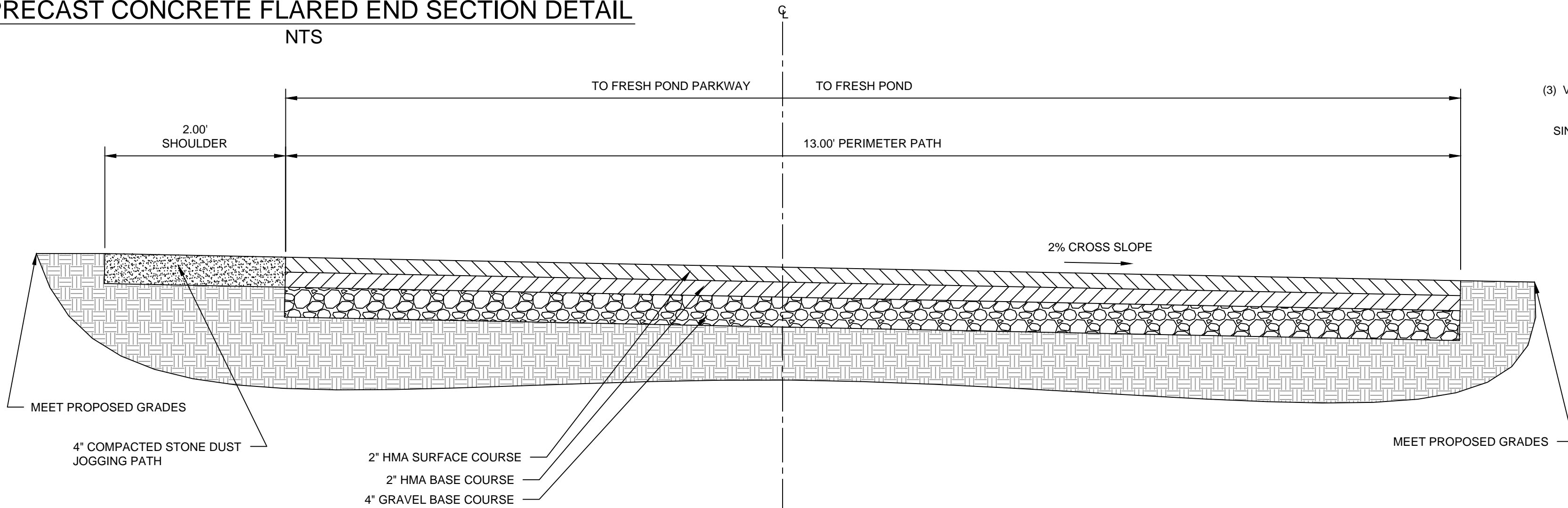
PIPE SIZE	
I.D.	12"
"A"	2"
"R"	5"
"S"	24"
"T"	24"
"U"	4"
"V"	24"
WT/FT	360

NOTE: UTILIZE HDPE TO CONCRETE GASKET TO CONNECT PRECAST CONCRETE END SECTION TO HDPE 12" AND 8" DIAMETER DRAIN PIPES

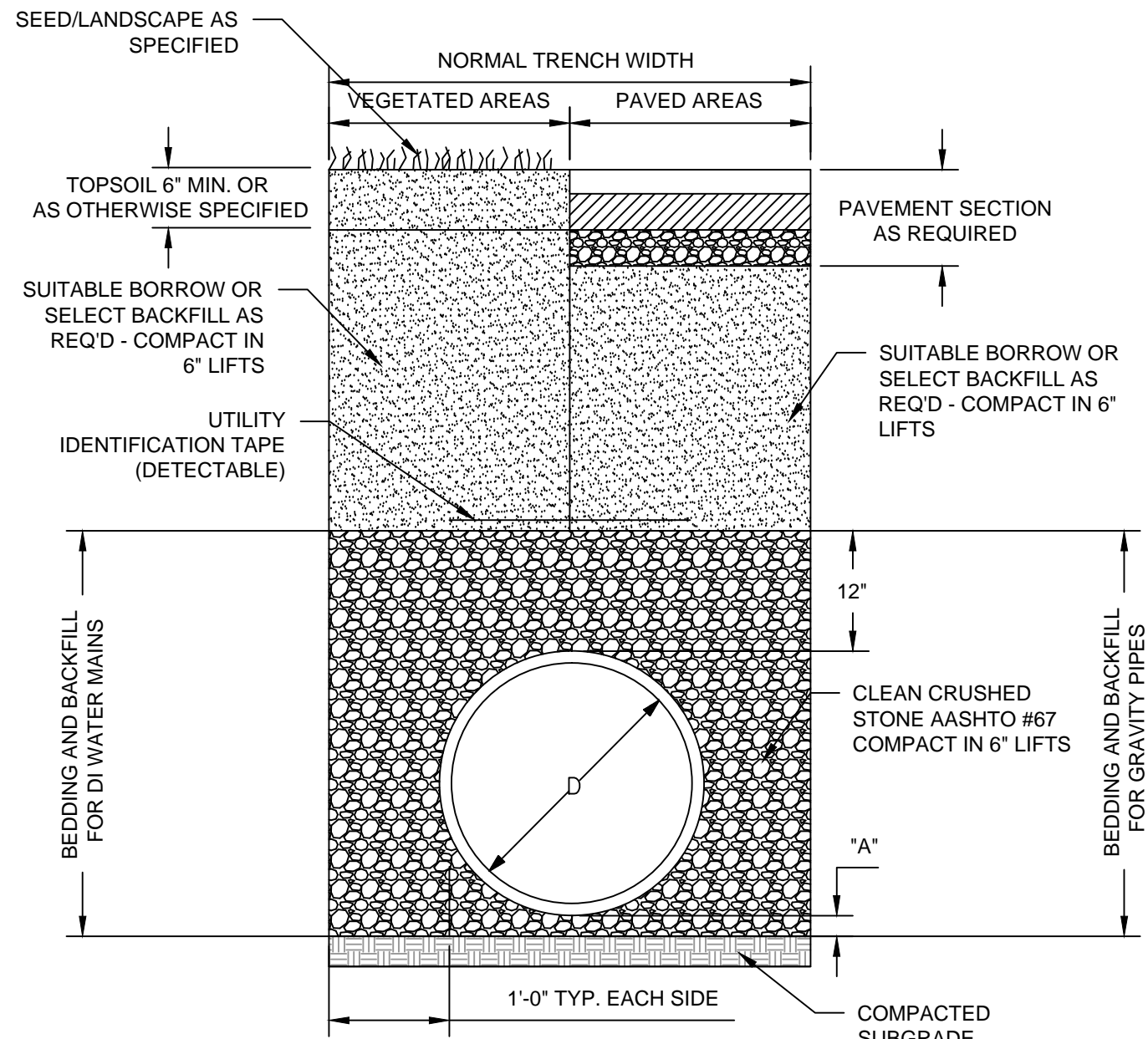
PRECAST CONCRETE FLARED END SECTION DETAIL
NTS



RIPRAP APRON (TYP)
NTS

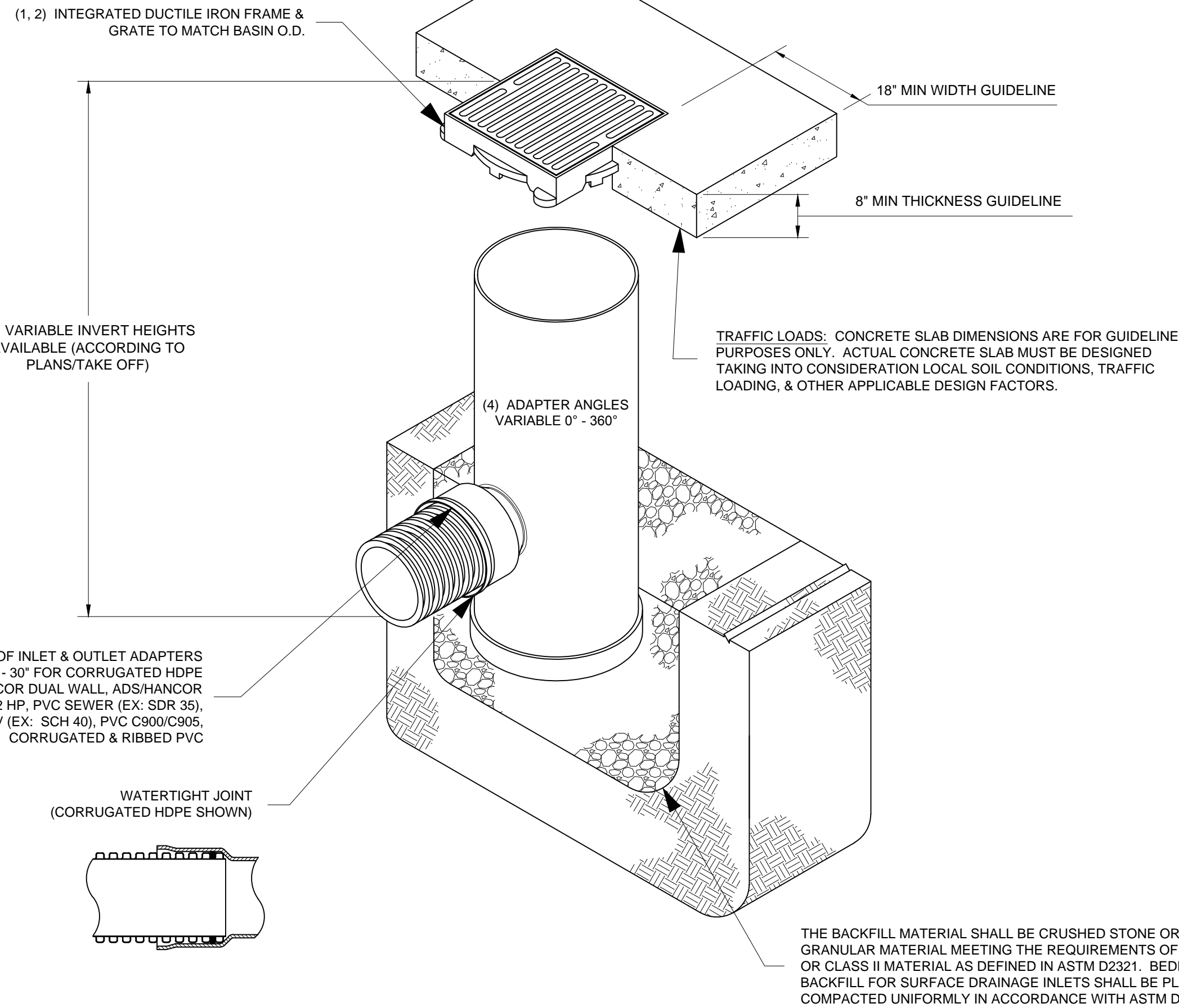


PERIMETER ROAD SECTION (TYP.)
NTS

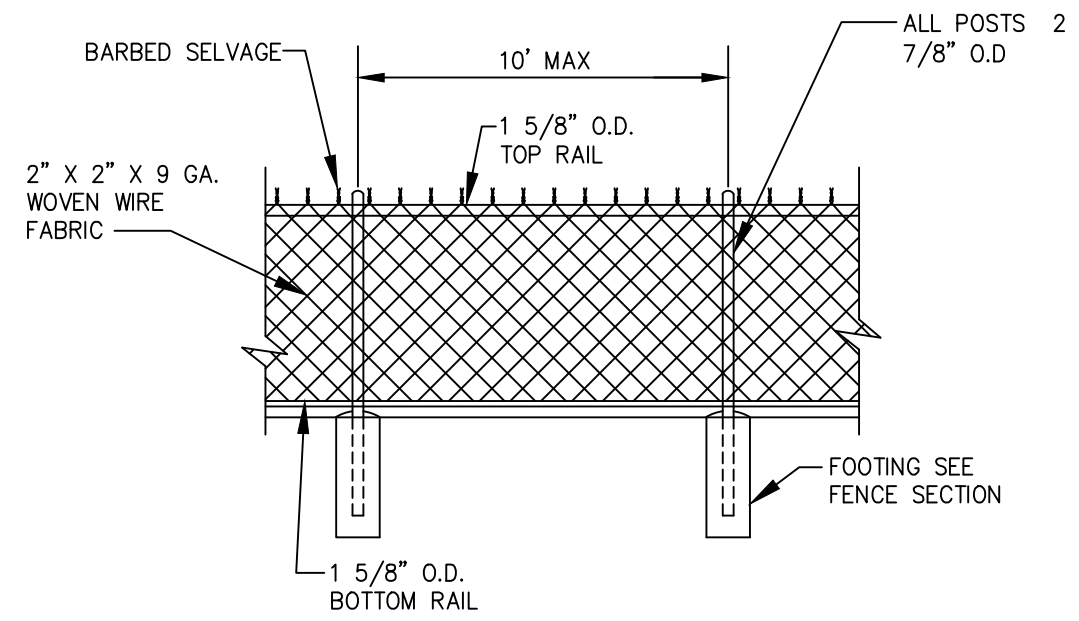


PIPE TRENCH DETAIL (TYP)
NTS

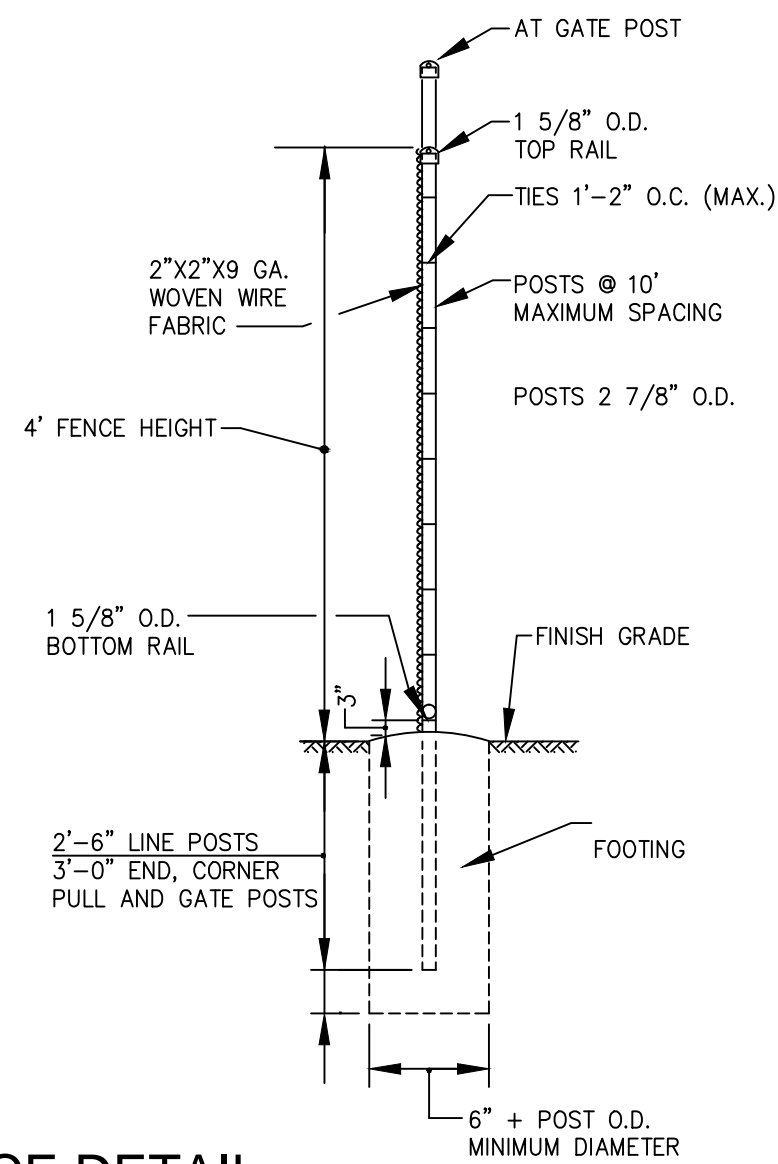
TRENCH PAY LIMITS FOR PIPES		
PIPE SIZE (DIA.)	MAX TRENCH WIDTH FOR PAYMENT	MAX "A" FOR PAYMENT
LESS THAN 2"	2'-0"	0'-6"
2" TO 6"	3'-0"	0'-6"
8" TO 22"	4'-0"	0'-9"
24" & GREATER	ID + 2'-0"	1'-0"



HDPE YARD INLET AND DETAIL (TYP)
NTS



4' TALL CHAIN LINK FENCE DETAIL
NTS



75%

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REVISIONS



Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

Drawing

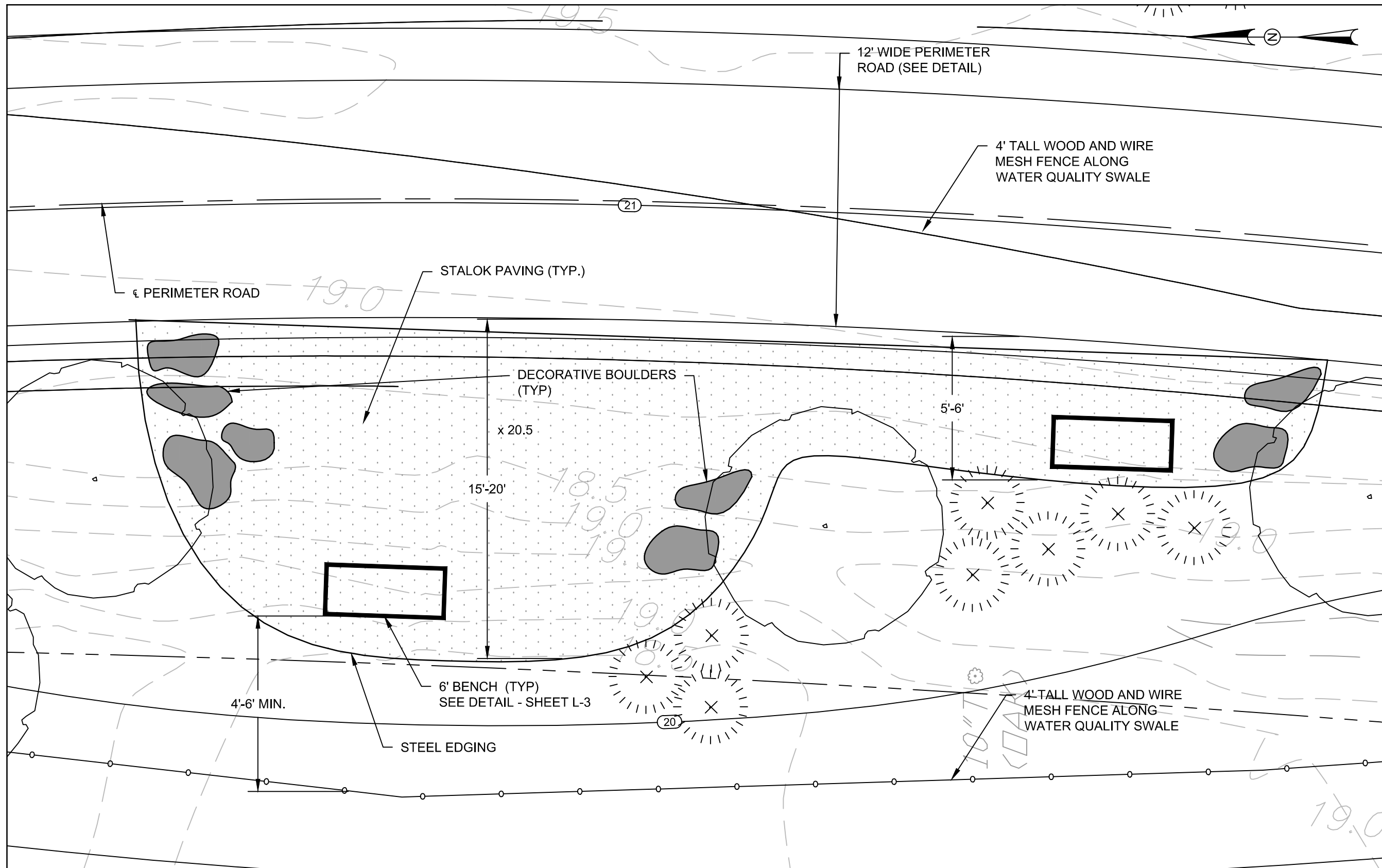
CONSTRUCTION DETAILS 2 OF 3

Sheet

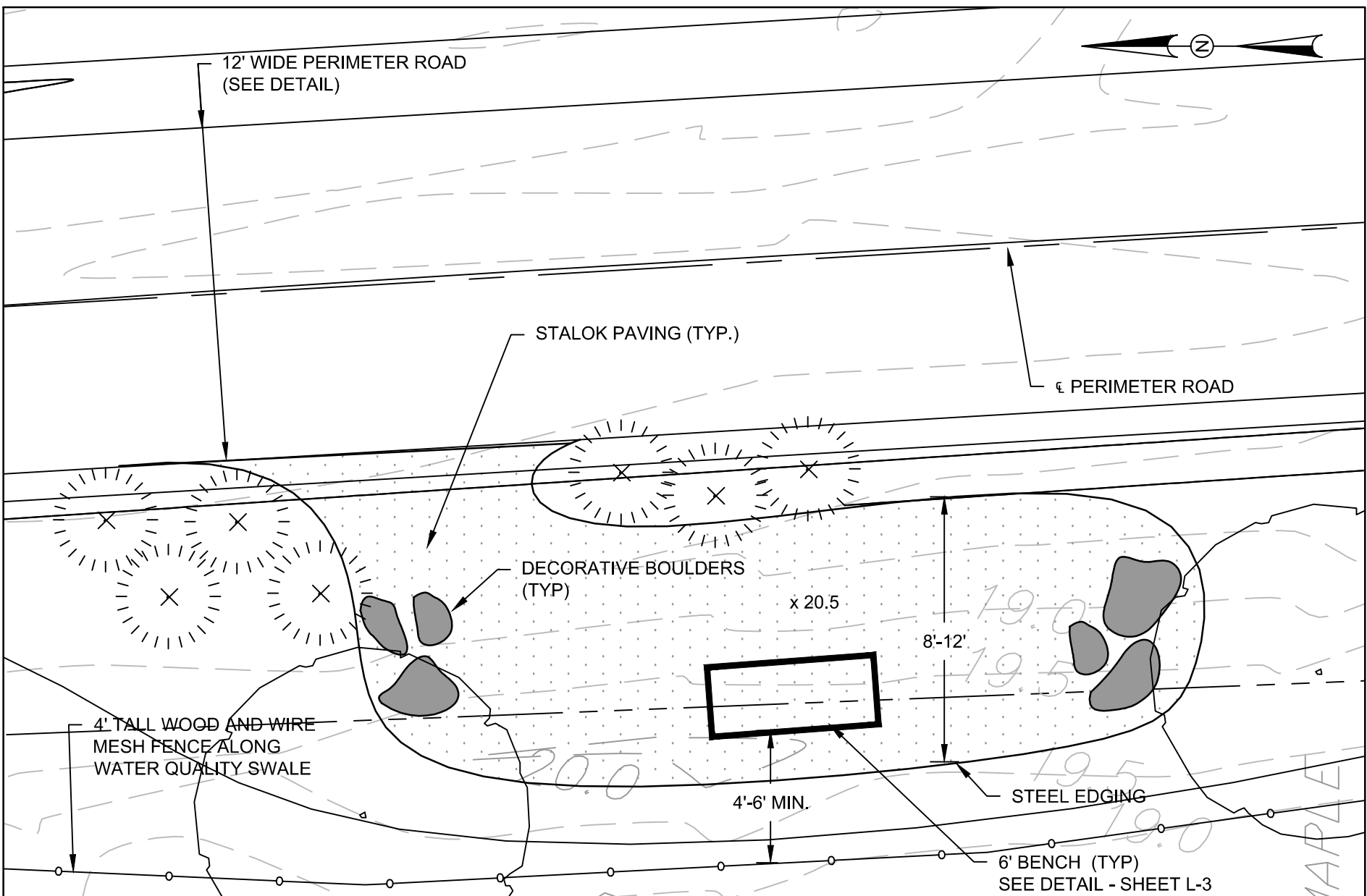
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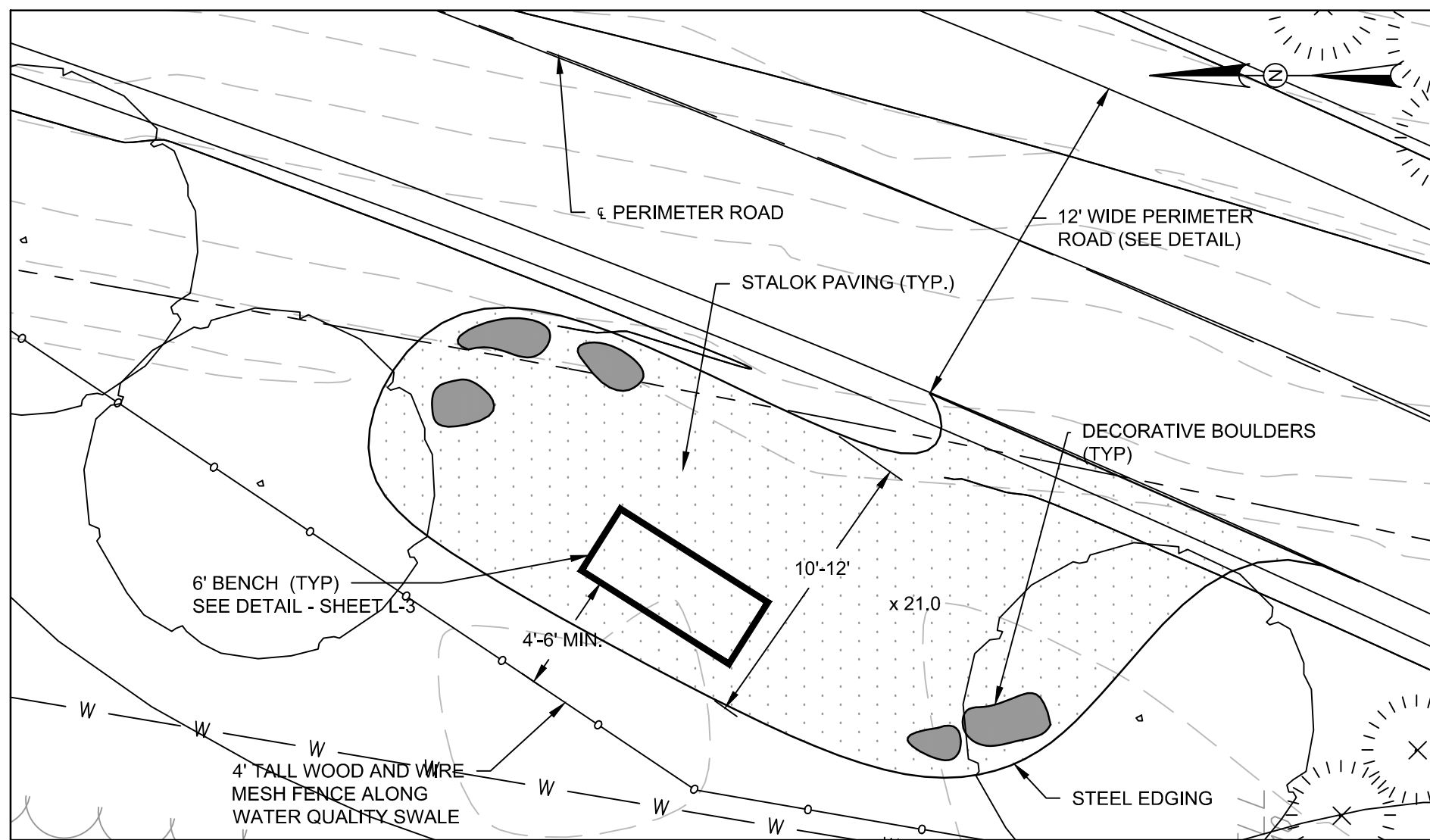
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SCENIC REST AREA DETAIL 1
SCALE: 1" = 5'



SCENIC REST AREA DETAIL 2
SCALE: 1" = 5'



SCENIC REST AREA DETAIL 3
SCALE: 1" = 5'

75%

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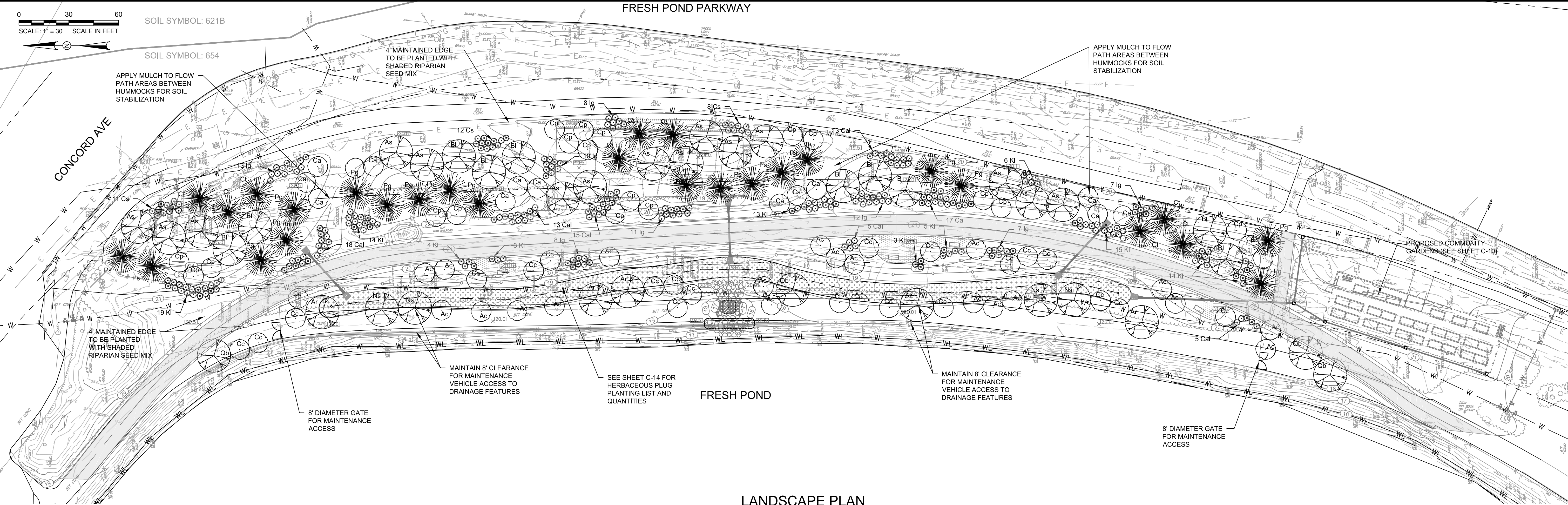
Description

Date



Client
CITY OF CAMBRIDGE, MASSACHUSETTS
Project
FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS
Drawing
CONSTRUCTION DETAILS 3 OF 3

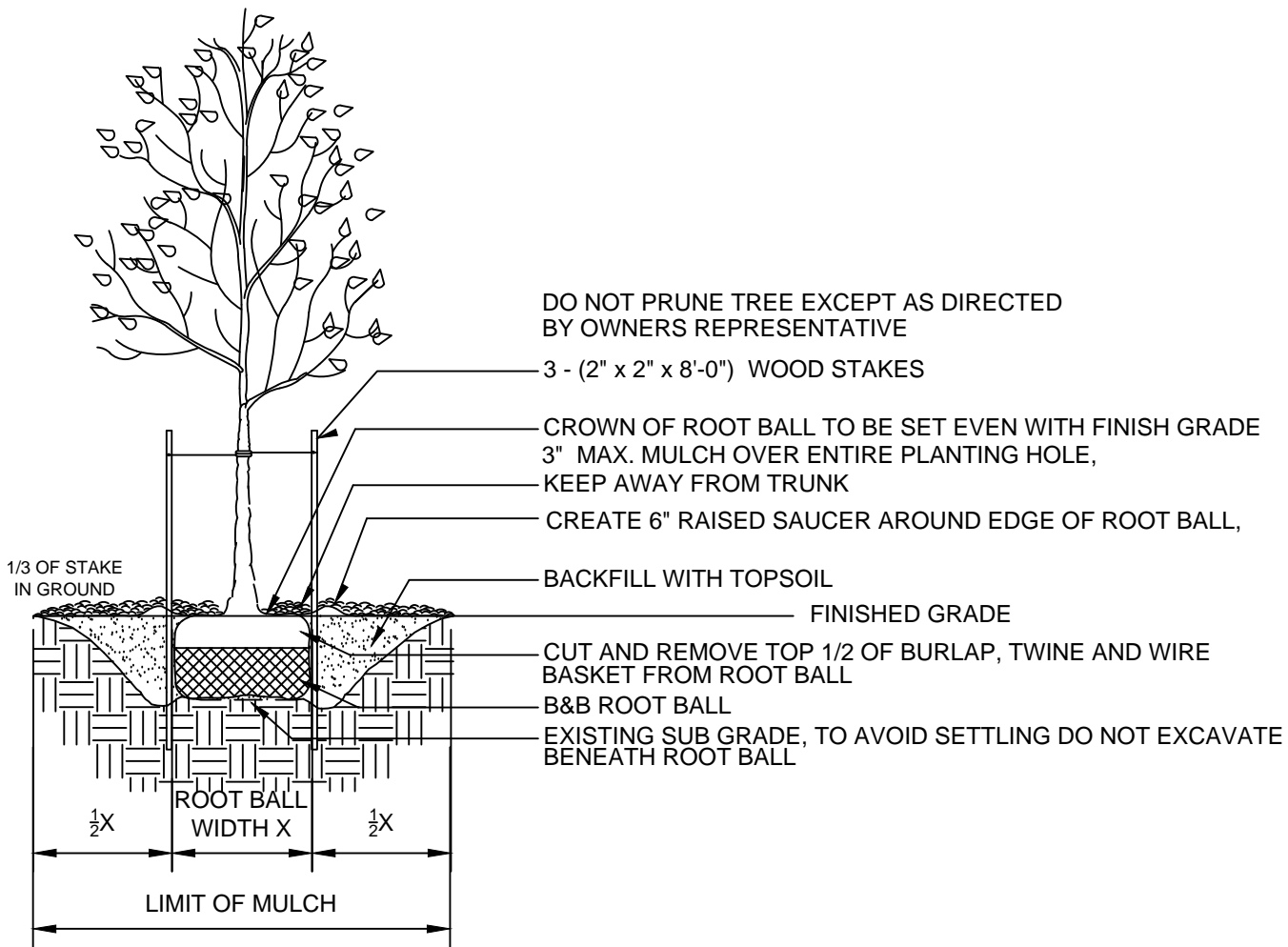
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File No.



LANDSCAPE PLAN
1" = 30'

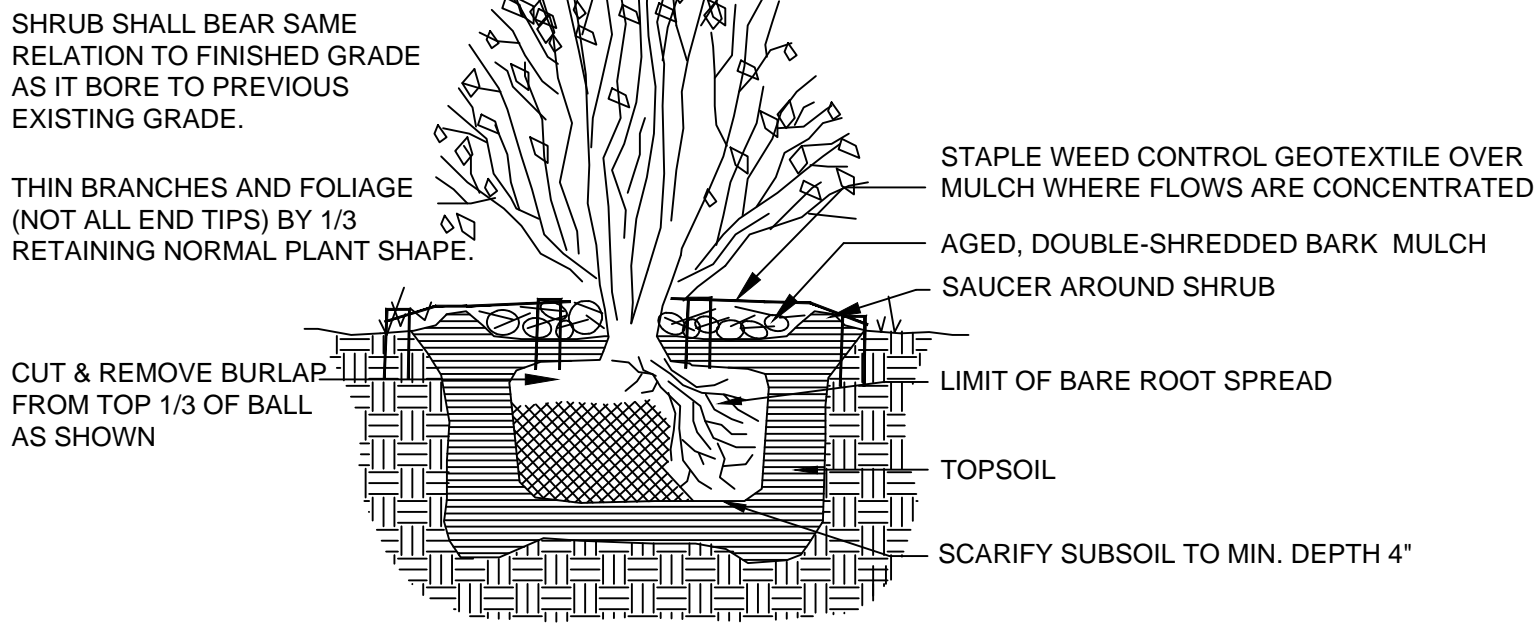
LANDSCAPE LEGEND:

- PROPOSED DECIDUOUS CANOPY TREE
- PROPOSED EVERGREEN CANOPY TREE
- PROPOSED DECIDUOUS UNDERSTORY TREE
- PROPOSED SHRUB
- PROPOSED BIORETENTION PLANTINGS



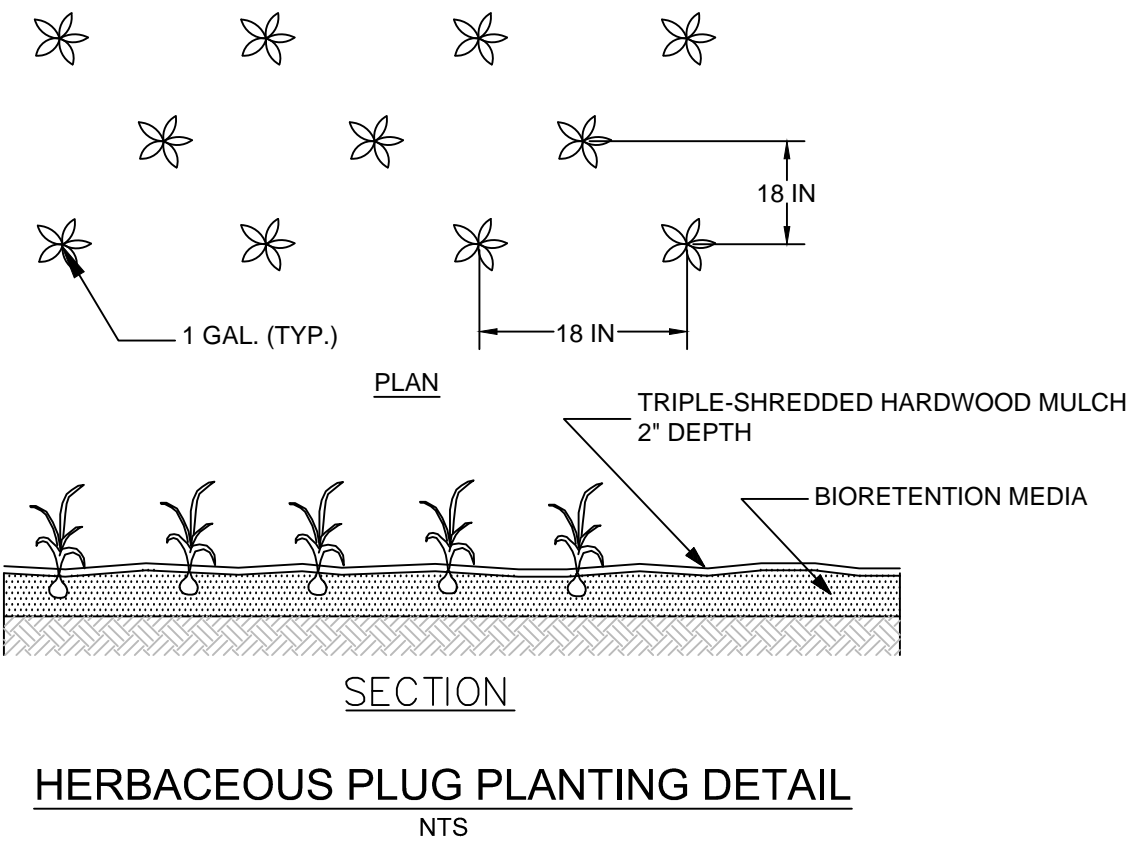
- NOTES:
- DO NOT DAMAGE MAIN ROOTS OR ROOT BALL WHEN INSTALLING TREE STAKE.
 - WATER THOROUGHLY AFTER INSTALLATION.
 - REMOVE STAKES TWO YEARS OR LESS AFTER INSTALLATION.
 - CONTRACTOR IS RESPONSIBLE FOR TEMPORARY TREE PROTECTION DURING WARRANTY PERIOD. ALL METHODS FOR TREE PROTECTION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.

TREE PLANTING DETAIL
NTS



NOTE: CONTRACTOR IS RESPONSIBLE FOR TEMPORARY TREE PROTECTION DURING WARRANTY PERIOD. ALL METHODS FOR TREE PROTECTION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.

SHRUB PLANTING DETAIL
NTS



HERBACEOUS PLUG PLANTING DETAIL
NTS

- NOTES:
- PROVIDE CONFIRMATION OF THE PLANTING SEASON AND CERTIFICATION FROM THE NURSERY FOR ALL TREES, SHRUBS AND PLANTS PROVIDED ON THIS PROJECT.
 - FAILED TREES, SHRUBS AND PLANTS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

75%

SCALE VERIFICATION
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0 1"

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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS
Drawing	LANDSCAPE PLAN & DETAILS

Sheet	C-13
File No.	

PLOT DATE= 10/21/2015 5:28:45 PM USER= BRIAN FRIEDLICH FILENAME= C:\pwworking\dd0112759\LandscapingPlan&Data.dwg

TREE PLANTING SCHEDULE

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE*
4	Ar	Acer rubrum	Red Maple	1.5" – 2.5" CAL, B & B
15	As	Acer saccharum	Sugar Maple	1.5" – 2.5" CAL, B & B
10	Bl	Bentula lenta	Sweet Birch	1.5" – 2.5" CAL, B & B
4	Ns	Nyssa sylvatica	Black Tupelo	1.5" – 2.5" CAL, B & B
4	Qb	Quercus bicolor	Swamp White Oak	1.5" – 2.5" CAL, B & B
9	Ct	Chamaecyparis thyoides	Atlantic White Cedar	8"-10', B & B
12	Pg	Picea glauca	White Spruce	8"-10', B & B
7	Ps	Pinus strobus	White Pine	8"-10', B & B
19	Ac	Amelanchier canadensis	Serviceberry	12', B & B
14	Ca	Cornus alterniflora	Pagoda Dogwood	12', B & B
23	Cc	Cercis canadensis	Eastern Redbud	12', B & B
20	Cp	Crataegus phaenopyrum	Washington Hawthorn	12', B & B

* NOTE: IN ORDER TO CREATE A NATURALISTIC LOOK UPON PLANTING, A MIX OF SIZES SHALL BE USED FOR EACH SPECIE INCLUDING SAPPLINGS, SEEDLINGS, AND THE LISTED STANDARD SIZES.

SHRUB PLANTING SCHEDULE

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE
86	Cal	Clethra alnifolia	Sweet Pepperbush	18"-24" tall, 2-3 Gal
60	Ig	Ilex glabra	Inkberry	18"-24" tall, 2-3 Gal
65	Kl	Kalmia latifolia	Mountain Laurel	18"-24" tall, 2-3 Gal
31	Cs	Cornus sericea	Red-Twig Dogwood	18"-24" tall, 2-3 Gal

BIORETENTION HERBACEOUS PLUG PLANTING SCHEDULE

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE
175	Ain	Asclepias incarnata	Swamp Milkweed	Gallon Sized Pots
175	Ana	Aster novae-angliae	New England Aster	Gallon Sized Pots
175	Anb	Aster novi-belgii	New York Aster	Gallon Sized Pots
175	Clu	Carex lurida	Lurid Sedge	Gallon Sized Pots
175	Cst	Carex stricta	Tussock Sedge	Gallon Sized Pots
175	Cvu	Carex vulpinoides	Fox Sedge	Gallon Sized Pots
175	Cgl	Chelone glabra	White Turtlehead	Gallon Sized Pots
175	Ema	Eupatorium maculatum	Joe-Pye Weed	Gallon Sized Pots
175	Epe	Eupatorium perfoliatum	Boneset	Gallon Sized Pots
175	Jef	Juncus effusus	Soft Rush	Gallon Sized Pots
175	Ive	Iris versicolor	Blue Flag Iris	Gallon Sized Pots
175	Lsp	Liatris spicata	Dense Blazingstar	Gallon Sized Pots
175	Lca	Lobelia cardinalis	Cardinal Flowers	Gallon Sized Pots
175	Lsi	Lobelia siphilitica	Blue Lobelia	Gallon Sized Pots
175	Scy	Scirpus cyperinus	Woolgrass	Gallon Sized Pots
175	Spu	Scirpus pungens	Three-square Bulrush	Gallon Sized Pots

PLANTING NOTES:

- BIORETENTION HERBACEOUS PLUGS SHALL BE SPACED 18" APART IN THE BIORETENTION MEDIA
- A 2" TRIPLE SHREDDED HARDWOOD MULCH LAYER SHALL BE APPLIED TO THESE PLANTINGS.

PERMANENT LAWN/ TURF SEED MIX

PCT.	GRASS SEED
70%	Turf type tall fescue
20%	Perennial rye grass
10%	Kentucky blue grass

BIORETENTION SEED MIX (ERNMX-127 OR EQUAL)

%	BOTANICAL NAME	COMMON NAME
25 %	Elymus virginicus	Virginia Wild Rye
22 %	Carex vulpinoidea	Fox Sedge
20 %	Poa palustris	Fowl Bluegrass
7 %	Scirpus atrovirens	Green Bulrush
6 %	Carex scoparia	Blunt Broom Sedge
5 %	Verbena hastata	Blue Vervain
4 %	Juncus effusus	Soft Rush
2 %	Agrostis perennans	Autumn Bentgrass
2 %	Agrostis scabra	Ticklegrass, Rough Bentgrass
2 %	Bidens cernua	Nodding Bur Marigold
2 %	Mimulus ringens	Square Stemmed Monkey Flower
2 %	Scirpus cyperinus	Woolgrass
1 %	Aster puniceus	Purple Stemmed Aster

SEED AT 20 LB./ACRE ON BOTTOM AND SIDES OF BASIN OR PER MANUFACTURER SPECIFICATIONS

PLANTING NOTES:

- BIORETENTION BASIN SEED MIX TO BE APPLIED TO BOTTOM AND SIDES OF BASINS TO AN ELEVATION EQUAL TO THREE FEET ABOVE THE BASIN BOTTOM, EXCEPT IN AREAS TO BE PLANTED WITH TREES AND SHRUBS. PERMANENT TURF MIX TO BE USED IN OTHER AREAS OF DISTURBANCE.
- CONTACT ERNST SEEDS (WWW.ERNSTSEED.COM) OR EQUAL FOR ERNMX-127 SEED MIX PRICING AND AVAILABILITY.
- ALL SEEDED AREAS ON SLOPES SHALL BE STABILIZED WITH A BIODEGRADABLE EROSION CONTROL BLANKET SUCH AS LANDLOCK C2, NORTH AMERICAN GREEN S150, OR EQUIVALENT MATERIAL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE SEDIMENT AND EROSION CONTROL PLAN FOR LOCATION OF EROSION CONTROL BLANKET.

SHADED RIPARIAN SEED MIX

%	BOTANICAL NAME	COMMON NAME
20%	Elymus virginicus	Virginia Wild Rye
20%	Elymus riparius	Riverbank Wild Rye
15%	Lolium perenne	Perennial Rye Grass
10%	Poa trivialis	Rough Bluegrass
10%	Elymus hystrix	Bottlebrush Grass
10%	Glyceria striata	Fowl Meadow Grass
5%	Agrostis alba	Red Top
3%	Cinna arundinacea	Wood Reedgrass
3%	Carex grayii	Gray's Sedge
2%	Carex gracillima	Graceful Sedge
2%	Bromus altissimus	Wild Brome Grass

SEED AT 20 LB./ACRE IN SHADED MOIST AREAS

OPEN LAWN AND TURF AREAS

- SEED ALL REMAINING PARK AREAS WITH TURF TYPE FALL FESCUE AND PERENNIAL RYEGRASS BLEND (LOFTS – SUMMER STRESS MIX II OR APPROVED EQUIVALENT). INSTALL AT A RATE OF 350 LBS. PER ACRE PER MANUFACTURERS SPECIFICATIONS.

TOPSOILING, SEEDING AND MULCHING NOTES

- ANY UNDISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 10 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE REQUIRED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR SHALL BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.
- DIVERSIONS, CHANNELS, SEDIMENTATION BASINS, SEDIMENT TRAPS, AND STOCKPILES MUST BE SEEDED AND MULCHED IMMEDIATELY.
- GRADED AREAS SHALL BE TEMPORARILY SEEDED AND MULCHED IMMEDIATELY FOLLOWING EARTH MOVING PROCEDURES. TEMPORARY SEED SHALL BE ANNUAL RYE GRASS APPLIED AT A RATE OF 3 LBS. PER 1000 SQ. FT.
- AFTER SEEDING, HAY OR STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 3.0 TONS PER ACRE. MULCH SHALL BE ANCHORED BY EITHER CRIMPING WITH A COULTER IMPLEMENT, OR BY STAPLING BIODEGRADABLE NETTING TO THE SURFACE.
- SITE PREPARATION TO UPLAND AREAS: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS 10-20-10 FERTILIZER AT THE RATE OF 500 LB. PER ACRE. WORK IN WHERE POSSIBLE. SEEDING OF DISTURBED UPLAND AREAS (BEYOND LIMITS OF RIPARIAN ENHANCEMENT AREA) TO BE DONE USING MIX OF FINE FESCUE AT 35 LBS/ACRE (PURE LIVE SEED) PLUS PERENNIAL RYEGRASS AT 15 LBS/ACRE (PURE LIVE SEED).
- TOPSOIL SHALL BE A CLEAN FRIABLE LOAM WITH SUFFICIENT ORGANIC CONTENT (2.75%) TO PROMOTE PLANT VIGOR. AMENDMENTS SHALL BE ADDED AS NEEDED TO IMPROVE DEFICIENT SOILS. TOPSOIL SHALL BE RETURNED AT A LOOSE DEPTH OF FIVE INCHES TO ALLOW FOR SETTLEMENT.
- ESTABLISH PERMANENT SEEDING AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETE. UNLESS OTHERWISE INDICATED, PERMANENT SEEDING SHALL BE SEED MIXTURE SPECIFIED IN TABLE.
- SEE TABLES FOR SEED SPECIES MIXTURE AND APPLICATION RATES.
- SEED MIXES ARE AVAILABLE AT BOSTON BARK LANDSCAPE SUPPLY, BOSTON MA, PHONE: 781-647-7500, OR PIERSON NURSERIES, INC., BIDDEFORD ME, PHONE: 207-499-2994
- NATIVE SHRUBS AND HERBACEOUS PLUGS ARE AVAILABLE AT BIGELOW NURSERIES, NORTHBORO MA, PHONE: 508-845-2143 OR SYLVAN NURSERY INC., WESTPORT MA, PHONE: 508-636-4573.

GENERAL LANDSCAPING NOTES

- ALL PLANT MATERIALS SHALL CONFIRM TO THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK (LATEST EDITION)
- INSPECTION OF PLANTING BEDS – THE LANDSCAPE ARCHITECT SHALL INSPECT ALL PLANTING AREAS BEFORE ANY TOPSOILING OR PLANTING IS BEGUN TO INSURE THAT ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE LANDSCAPED SHOW EVIDENCE OF POOR DRAINAGE, THE LANDSCAPE ARCHITECT SHALL NOTIFY THE OWNER IMMEDIATELY FOR CORRECTIVE ACTION
- THE LANDSCAPE ARCHITECT SHALL APPROVE ALL PLANT MATERIAL AND STAKED PLANT LOCATIONS PRIOR TO INSTALLATION. ALL HERBACEOUS PLUG PLANTINGS SHALL BE A MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 18" O.C. AS INDICATED ON PLAN.
- ALL TREES, SHRUBS, AND GROUNDCOVER SHALL BE PLACED IN CONTINUOUS MULCHED BEDS 4" IN DEPTH. MULCH SHALL BE TRIPLE SHREDDED HARDWOOD.
- ALL TREES, SHRUBS, AND GROUNDCOVER SHALL BE AS SPECIFIED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND COMMENTS NOTED ON THE DRAWINGS.
- TOPSOIL SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR FOR PLANTING ACCORDING TO THE PLANS AND DETAILS.
- PREPARED TOPSOIL FOR BACKFILLING AROUND TREE BALLS SHALL BE A MIXTURE OF VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: ⅓ COMPOST, ⅔ TOPSOIL
- ALL HERBACEOUS PLUG PLANTINGS SHALL BE MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 18" O.C. AS INDICATED ON PLAN.

75%

SCALE VERIFICATION
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0 1"

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FRANCIS MCPARTLAN, P.E.
PROFESSIONAL ENGINEER
MA LIC. NO. 49572

SIGNATURE DATE

Scale	AS NOTED
Date	OCTOBER 2015
Job No.	20150056.005A
Designed by	BJF
Drawn by	ELD
Checked by	FM
Approved by	FM

No.

Description

Date

REVISIONS



CITY OF CAMBRIDGE
WATER DEPARTMENT

Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

Drawing

PLANTING LIST AND NOTES

Sheet

C-14

File No.

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SIGNATURE

DATE

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Date	5 OCTOBER 2015
Job No.	1502
Designed by	KMDG
Drawn by	SK/RS
Checked by	KM
Approved by	KM

No.

Description
REVISIONS

Date



Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

Drawing

COMMUNITY GARDEN - MATERIALS AND LAYOUT PLAN

Sheet

L-1

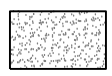
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LEGEND

PAVING AND FENCES

P1 STALOK PAVING



1
L-3

P2 BITUMINOUS CONCRETE
(SEE CIVIL DRAWINGS)

P3 FENCE

6
L-3

P4 GATE

1
L-4

P5 COMPOST ENCLOSURE

3
L-4

SITE FURNISHINGS

F1 BENCH



4
L-3

F2 BOLLARD



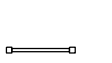
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L-3

F3 BICYCLE RACK, TOTAL OF 3



5
L-3

F4 BULLETIN BOARD



2
L-5

F5 RAISED GARDEN BED



2
L-3

F6 ACCESSIBLE GARDEN BED, TOTAL OF 3



1
L-5

F7 HOSE BIB



1
L-5

NOT FOR
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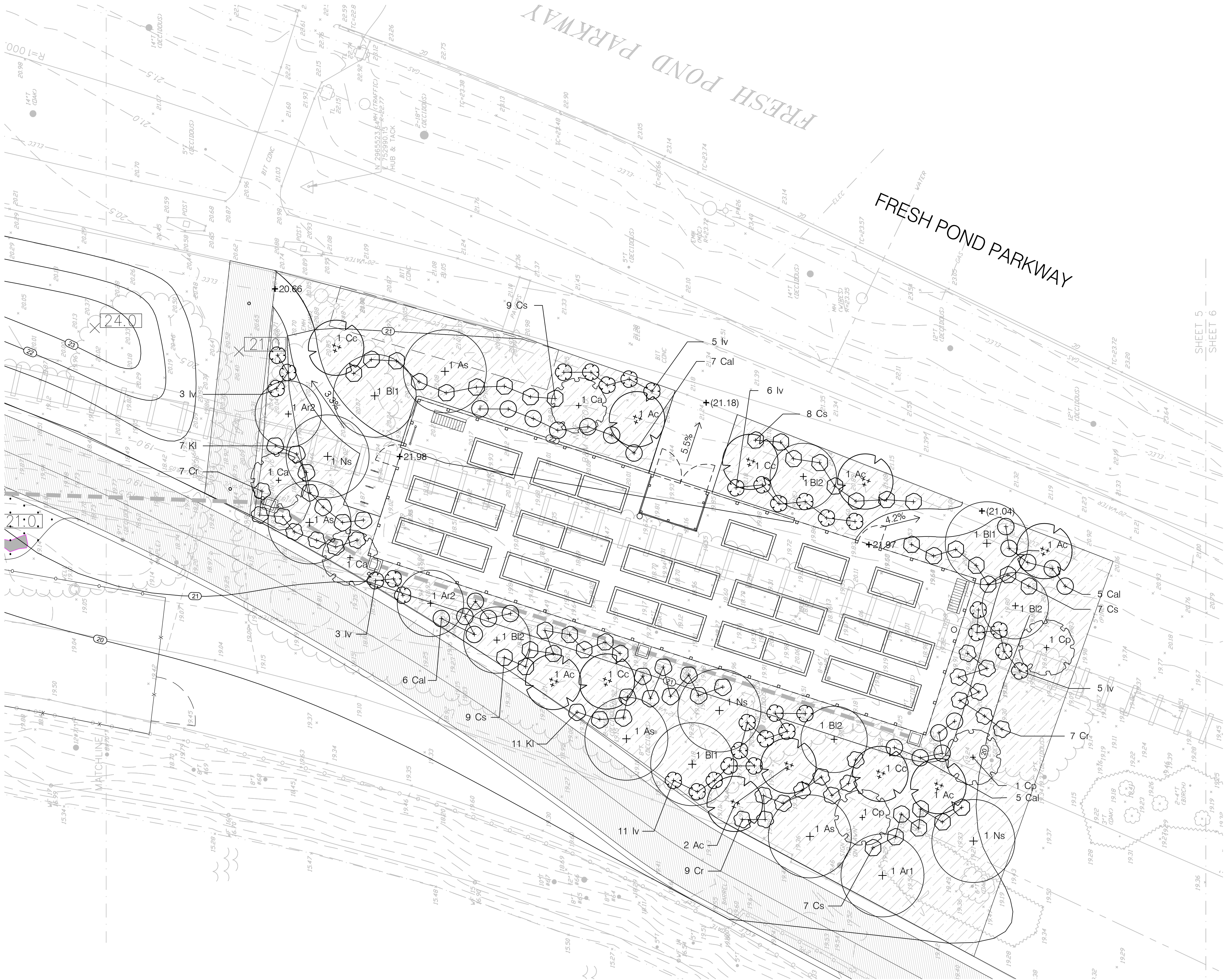
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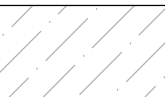
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PLANT SCHEDULE					
TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
Ac	7	Amelanchier canadensis	Canadian Serviceberry	10/12" B&B	multistem
Ar1	1	Acer rubrum	Red Maple	2-2.5" cal. B&B	
Ar2	2	Acer rubrum	Red Maple	8-10' ht.	
As	4	Acer saccharum	Sugar Maple	2-2.5" cal. B&B	
Bl1	3	Betula lenta	Sweet Birch	2-2.5" cal. B&B	
Bl2	4	Betula lenta	Sweet Birch	8/10" B&B	
Ca	3	Cornus alternifolia	Pagoda Dogwood	10/12" B&B	
Cc	4	Cercis canadensis	Eastern Redbud	10/12" B&B	multistem
Cp	3	Crataegus phaenopyrum	Washington Hawthorn	10/12" B&B	
Ns	3	Nyssa sylvatica	Sour Gum	2-2.5" cal. B&B	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
Cal	23	Clethra alnifolia	Summersweet Clethra	2.5/3'	
Cr	23	Cornus racemosa	Gray Dogwood	2.5/3'	
Cs	40	Cornus sericea	Red Twig Dogwood	2.5/3'	
Iv	33	Ilex verticillata	Winterberry	2.5/3'	
Kl	18	Kalmia latifolia	Mountain Laurel	2.5/3'	

 5800 SF Northeastern U.S. Roadside Native Mix, ERNMX-105

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DATE

Scale 1" = 10'

Date 5 OCTOBER 2015

Job No. 1502

Designed by KMDG

Drawn by SK/RS

Checked by KM

Approved by KM

No.

Description

Date

REVISIONS



Client

CITY OF CAMBRIDGE, MASSACHUSETTS

Project

FRESH POND DRAINAGE IMPROVEMENTS
COMMUNITY GARDENS

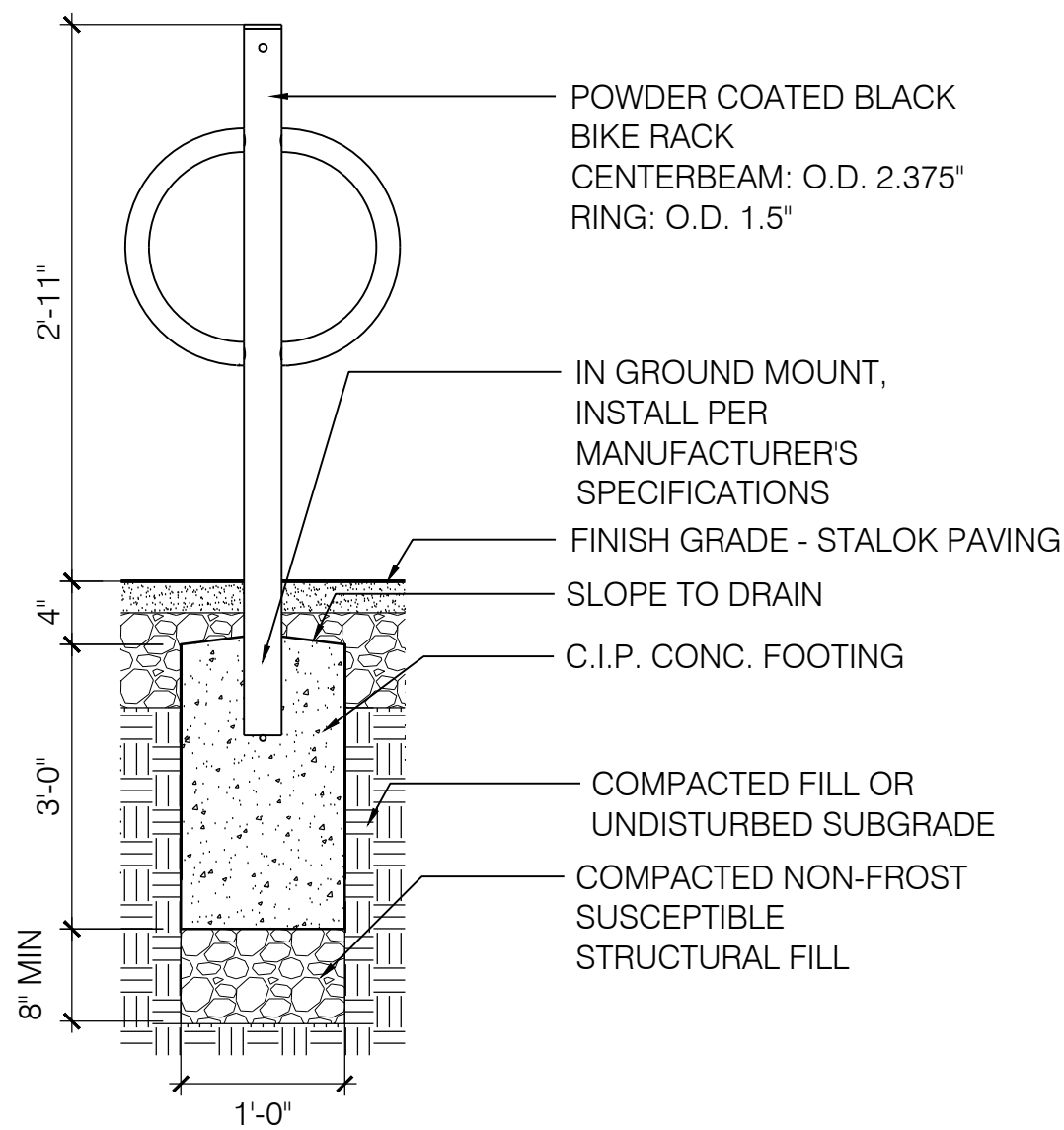
Drawing

COMMUNITY GARDEN - PLANTING AND GRADING PLAN

Sheet

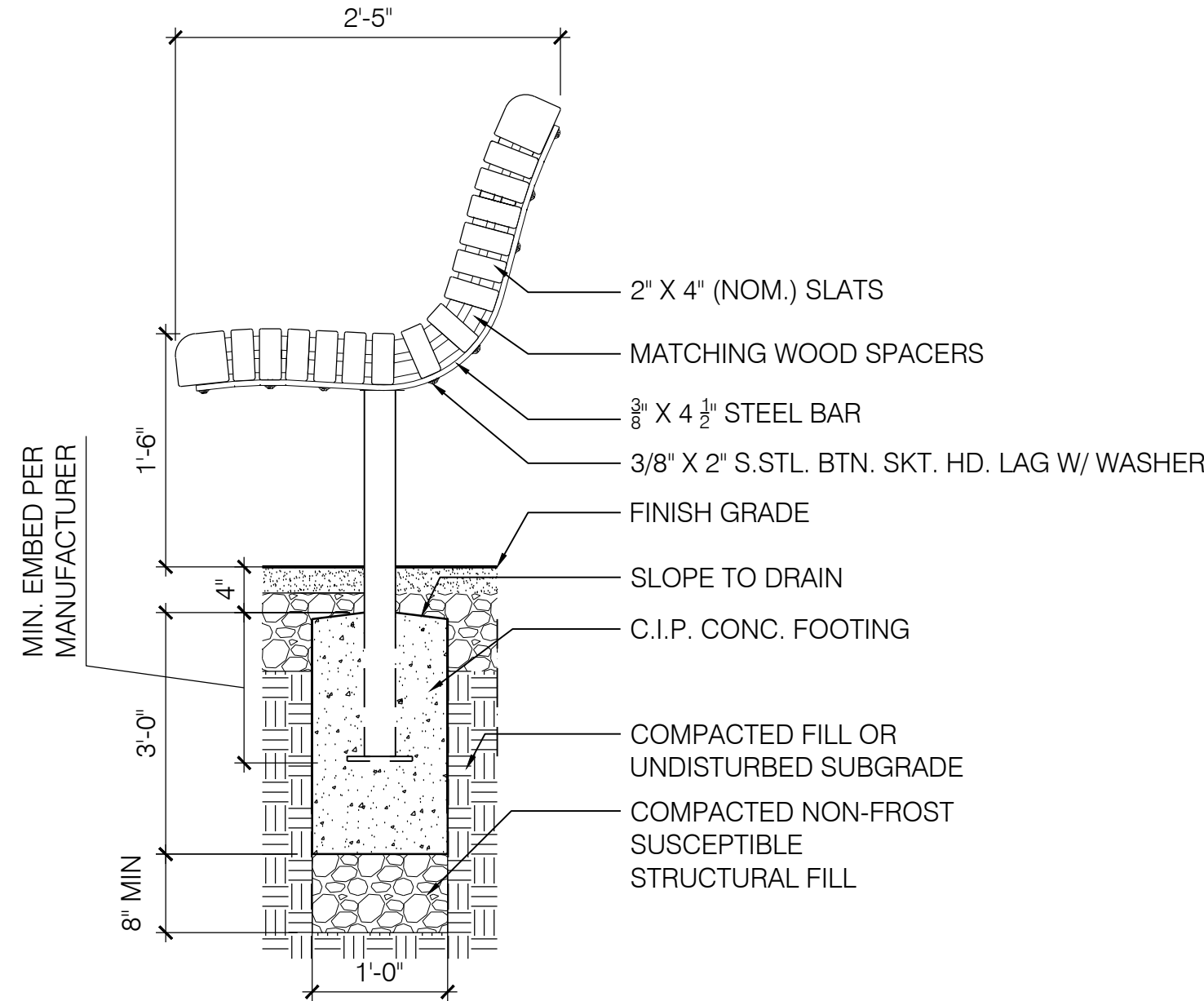
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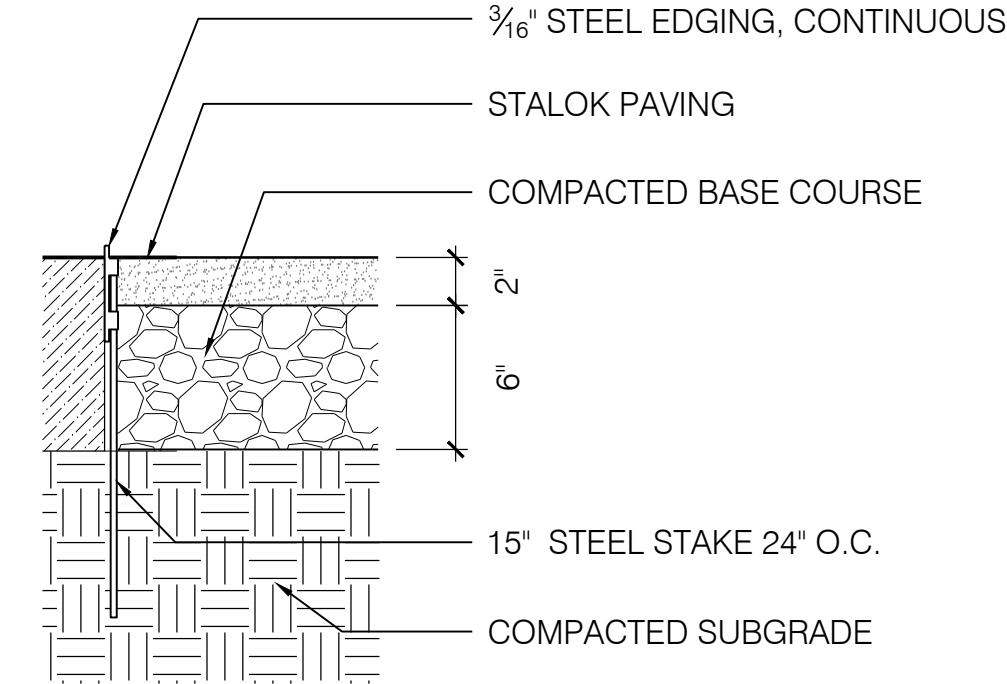
5 STEEL BIKE RACK

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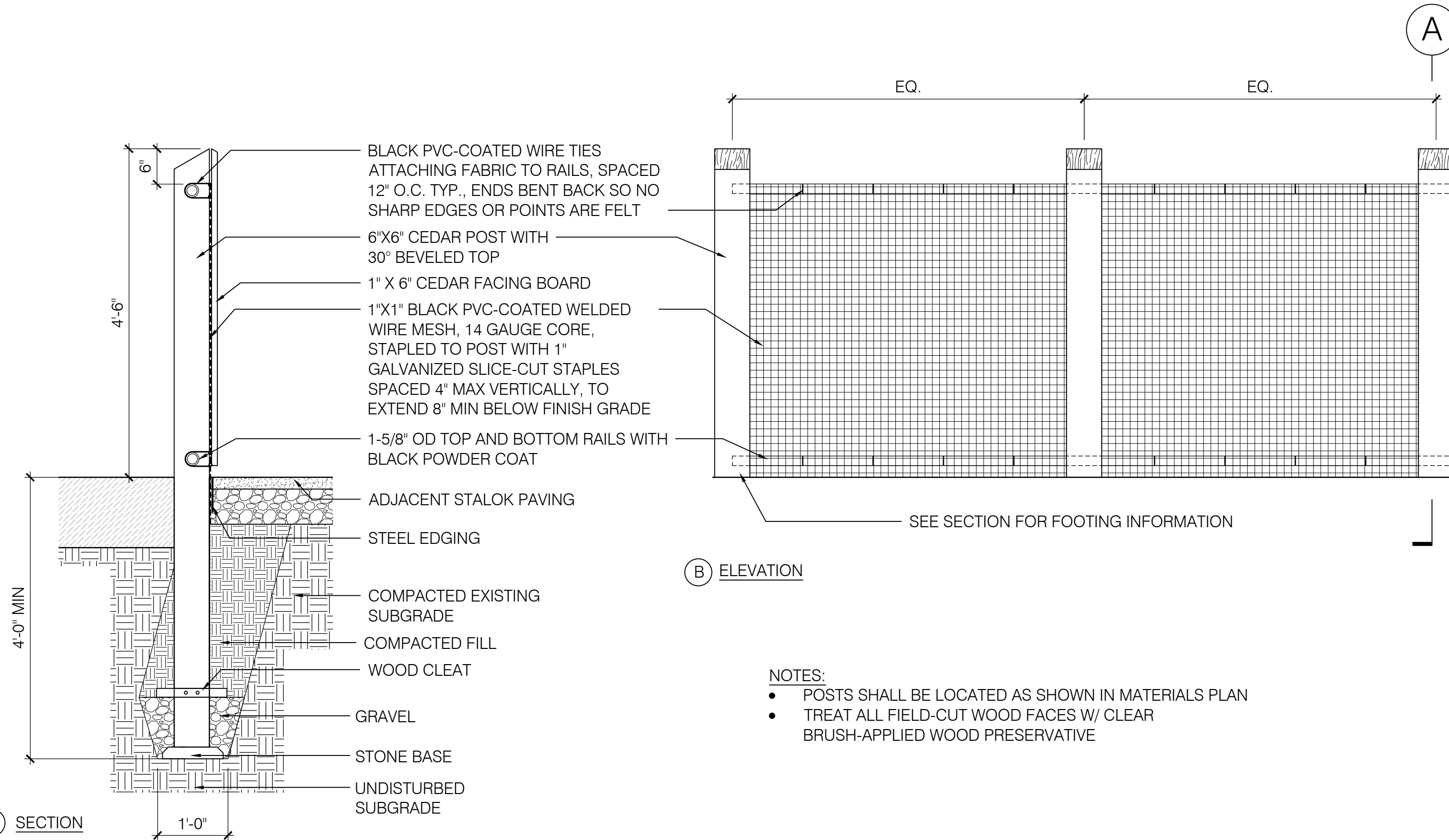
4 BENCH

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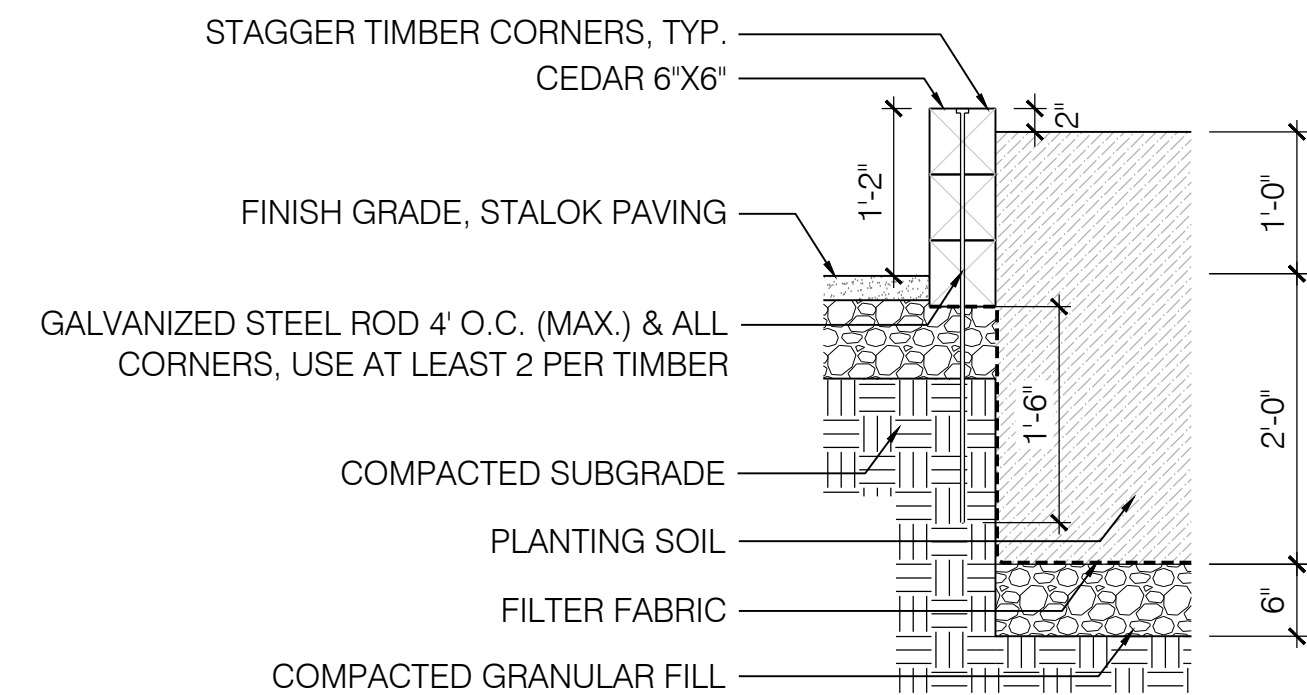
1 STALOK PAVING

SCALE: 1 1/2" = 1'-0"



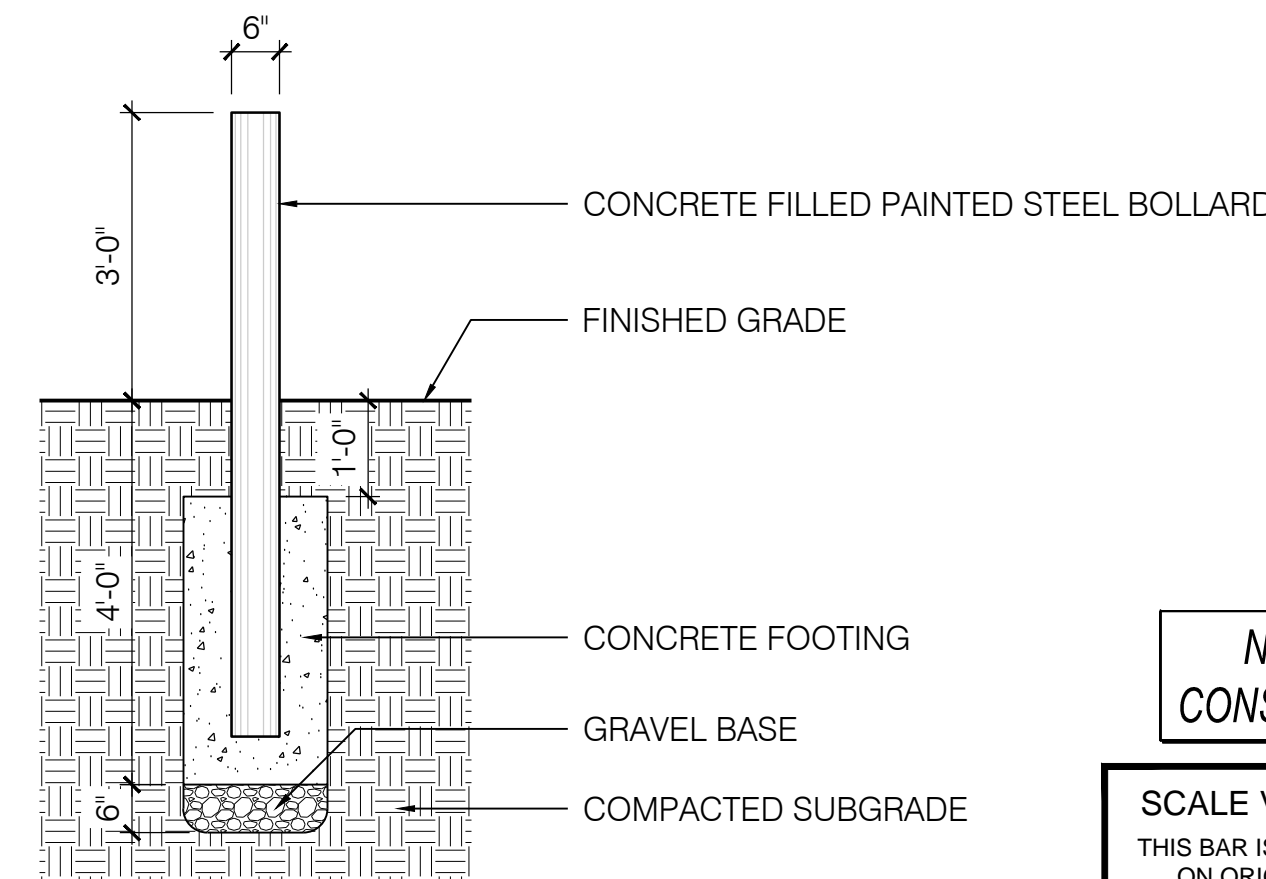
6 WOOD AND WIRE MESH FENCE

SCALE: 3/4" = 1'-0"



2 RAISED PLANTER

SCALE: 3/4" = 1'-0"



3 STEEL BOLLARD

SCALE: 1/2" = 1'-0"

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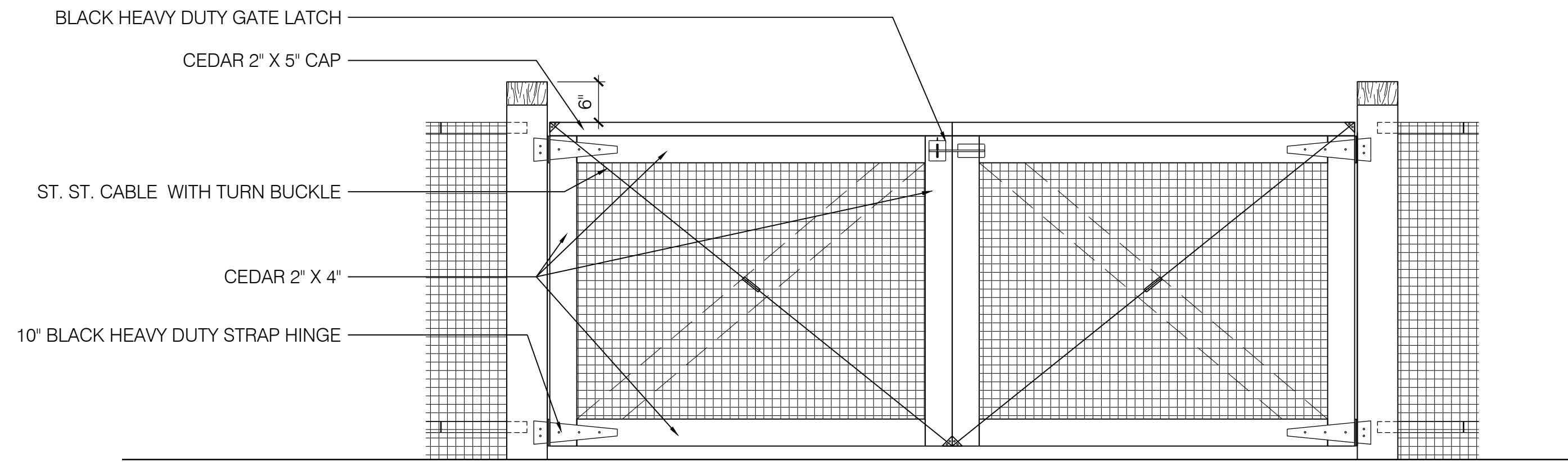
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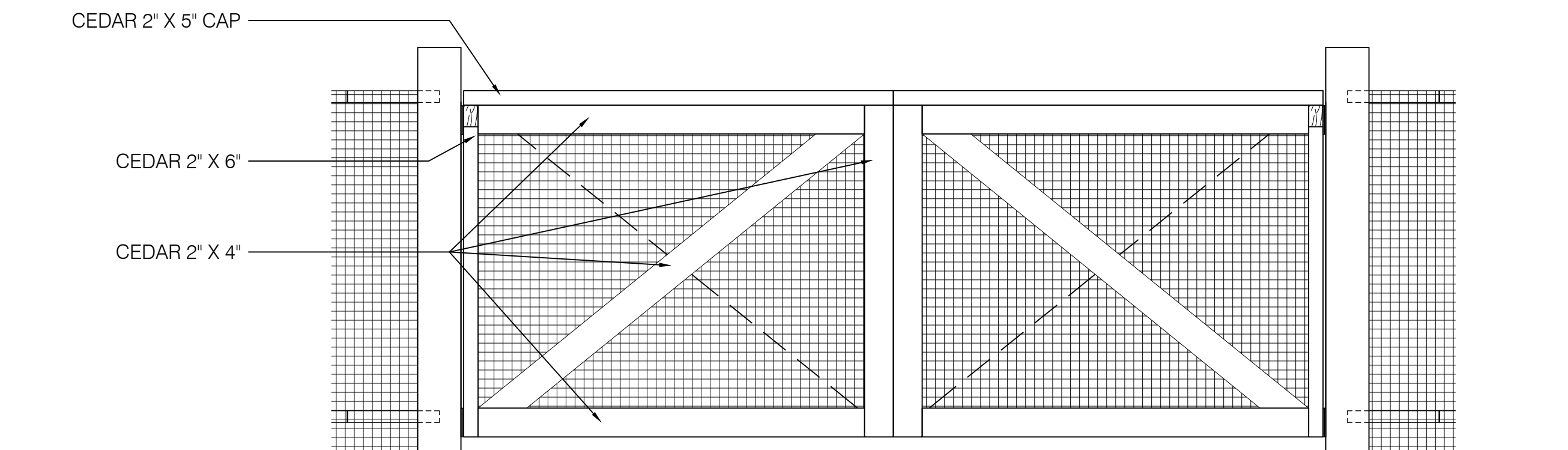
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Date	5 OCTOBER 2015				
Job No.	1502				
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Drawn by	SK/RS				
Checked by	KM	No.	Description	Date	
Approved by	KM		REVISIONS		

Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	L-3
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS	File No.	
Drawing	COMMUNITY GARDEN - DETAILS 1		

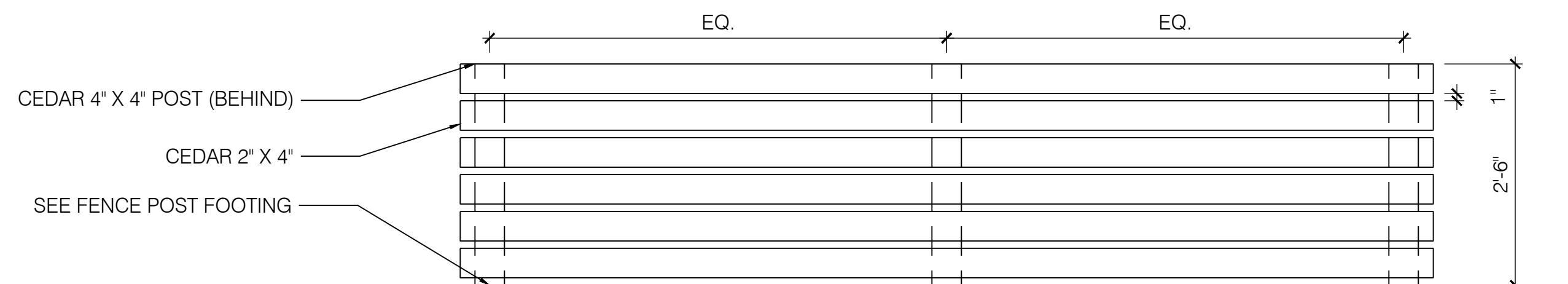
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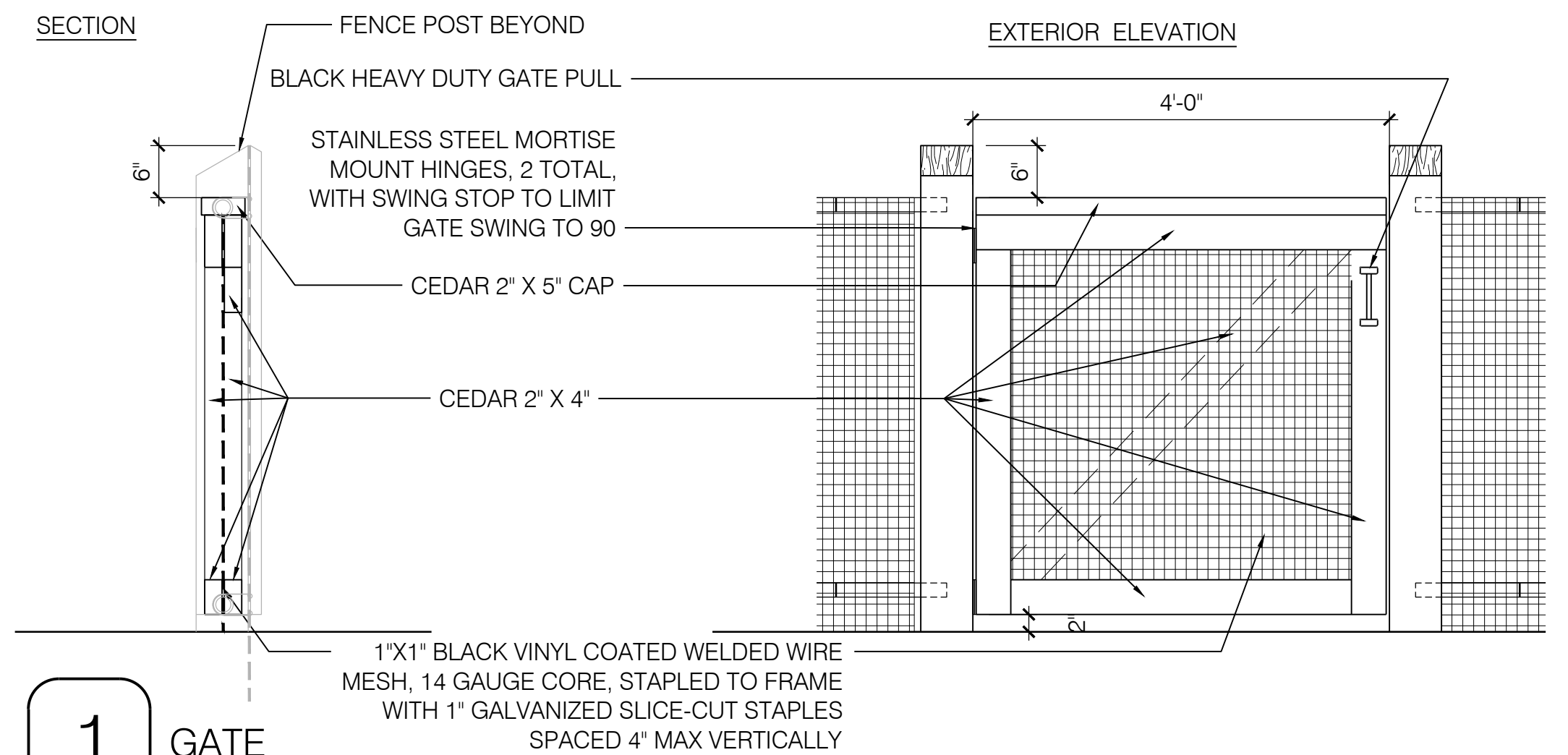
4 DOUBLE SWING GATE - EXTERIOR ELEVATION
SCALE: 3/4" = 1'-0"



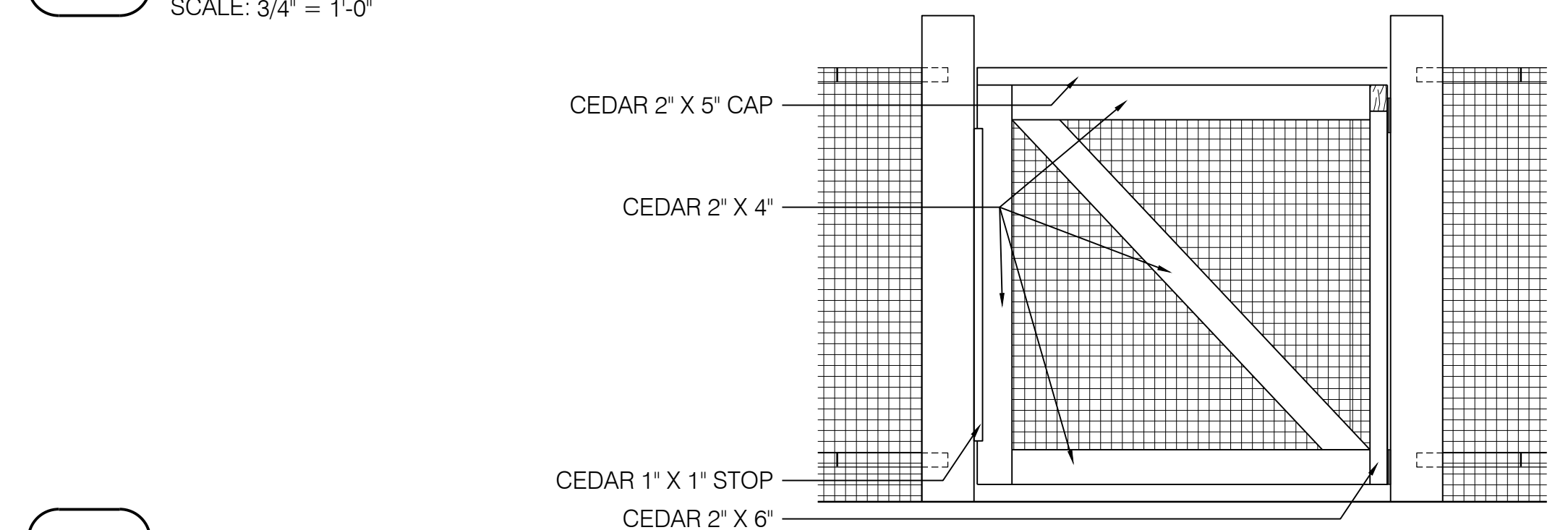
5 DOUBLE SWING GATE - INTERIOR ELEVATION
SCALE: 3/4" = 1'-0"



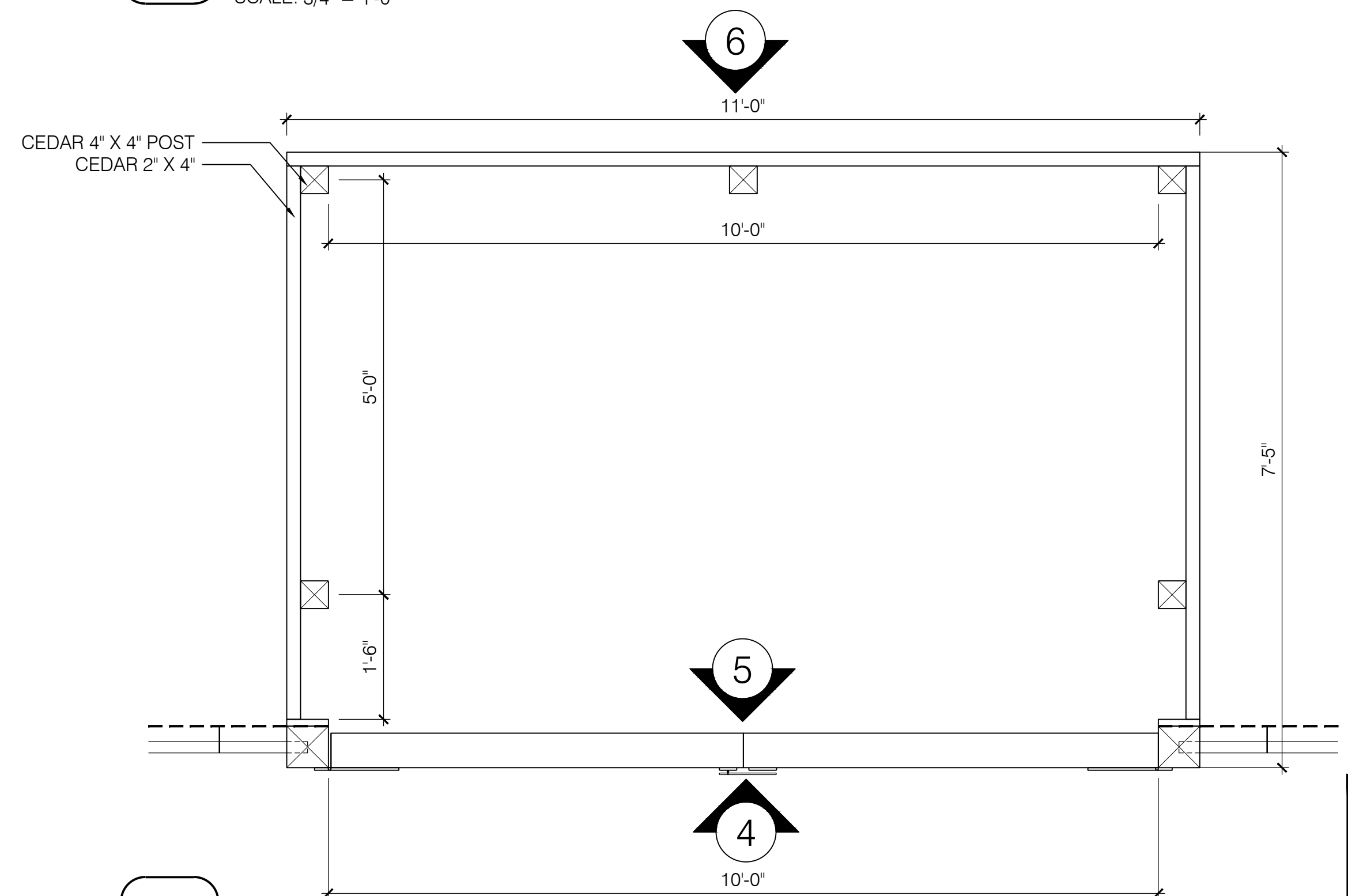
6 COMPOST ENCLOSURE - REAR ELEVATION
SCALE: 3/4" = 1'-0"



1 GATE
SCALE: 3/4" = 1'-0"



2 GATE - INTERIOR ELEVATION
SCALE: 3/4" = 1'-0"



3 COMPOST ENCLOSURE - PLAN
SCALE: 3/4" = 1'-0"

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Date	5 OCTOBER 2015			
Job No.	1502			
Designed by	KMDG			
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Checked by	KM	No.	Description	Date
Approved by	KM		REVISIONS	

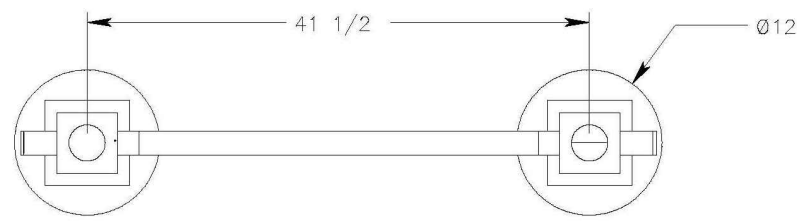


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Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS
Drawing	COMMUNITY GARDEN - DETAILS 2

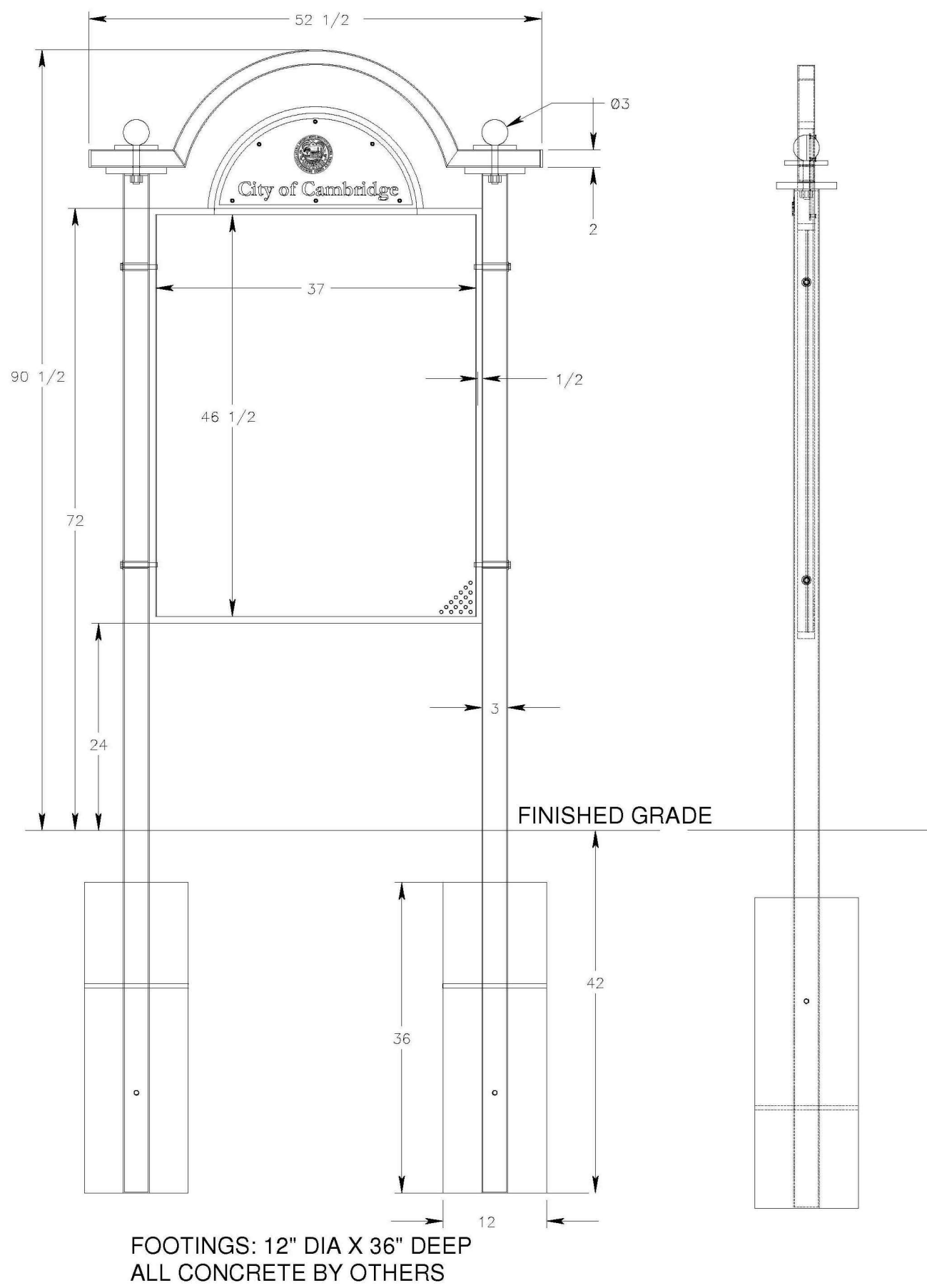
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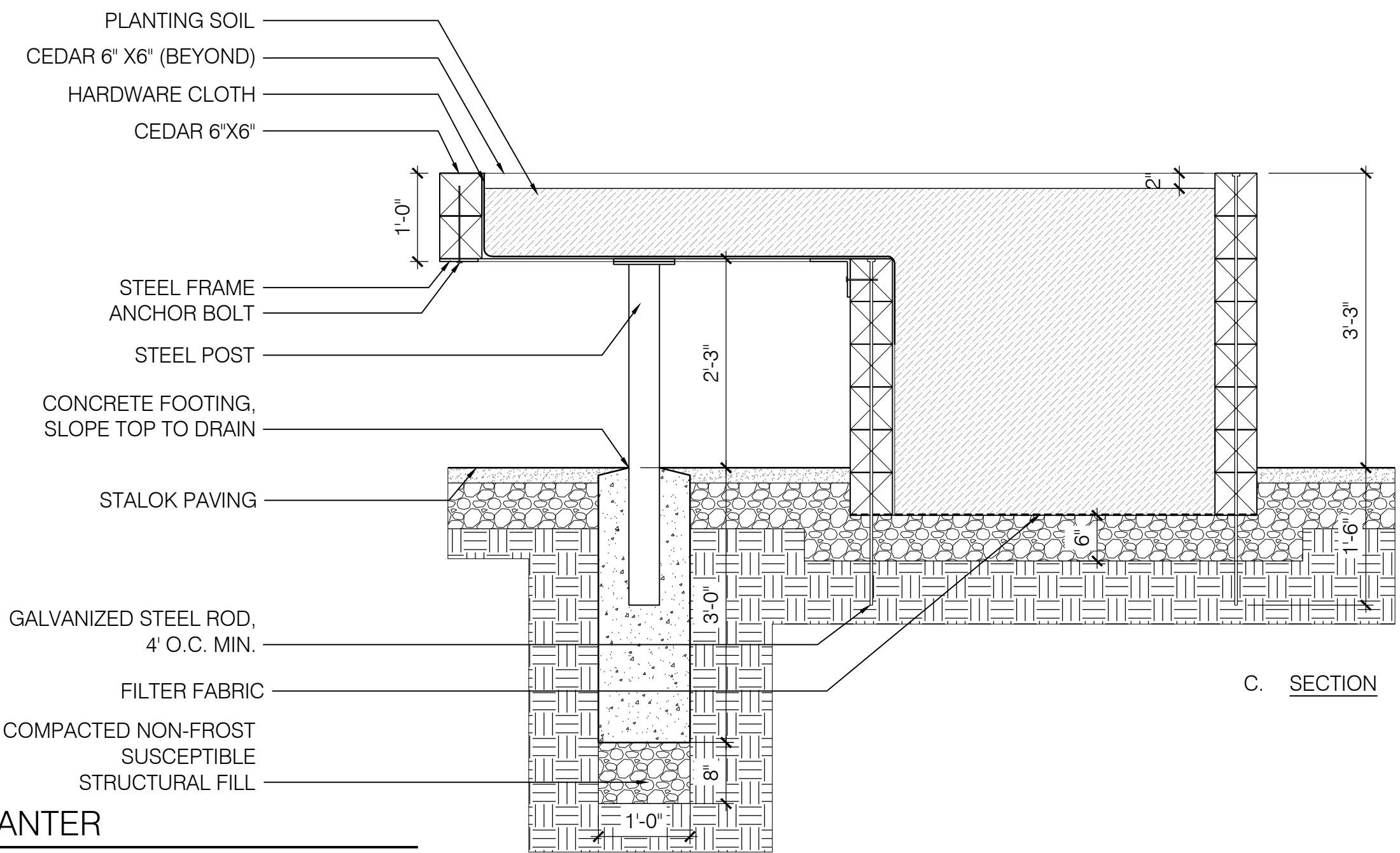
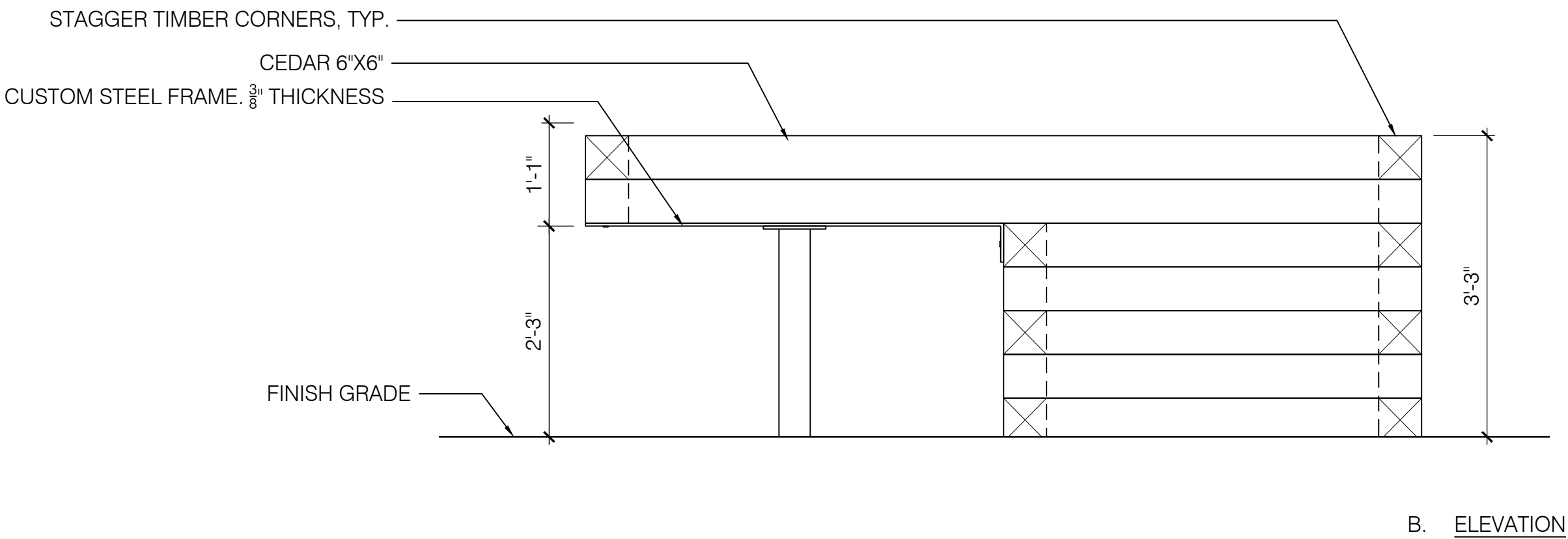
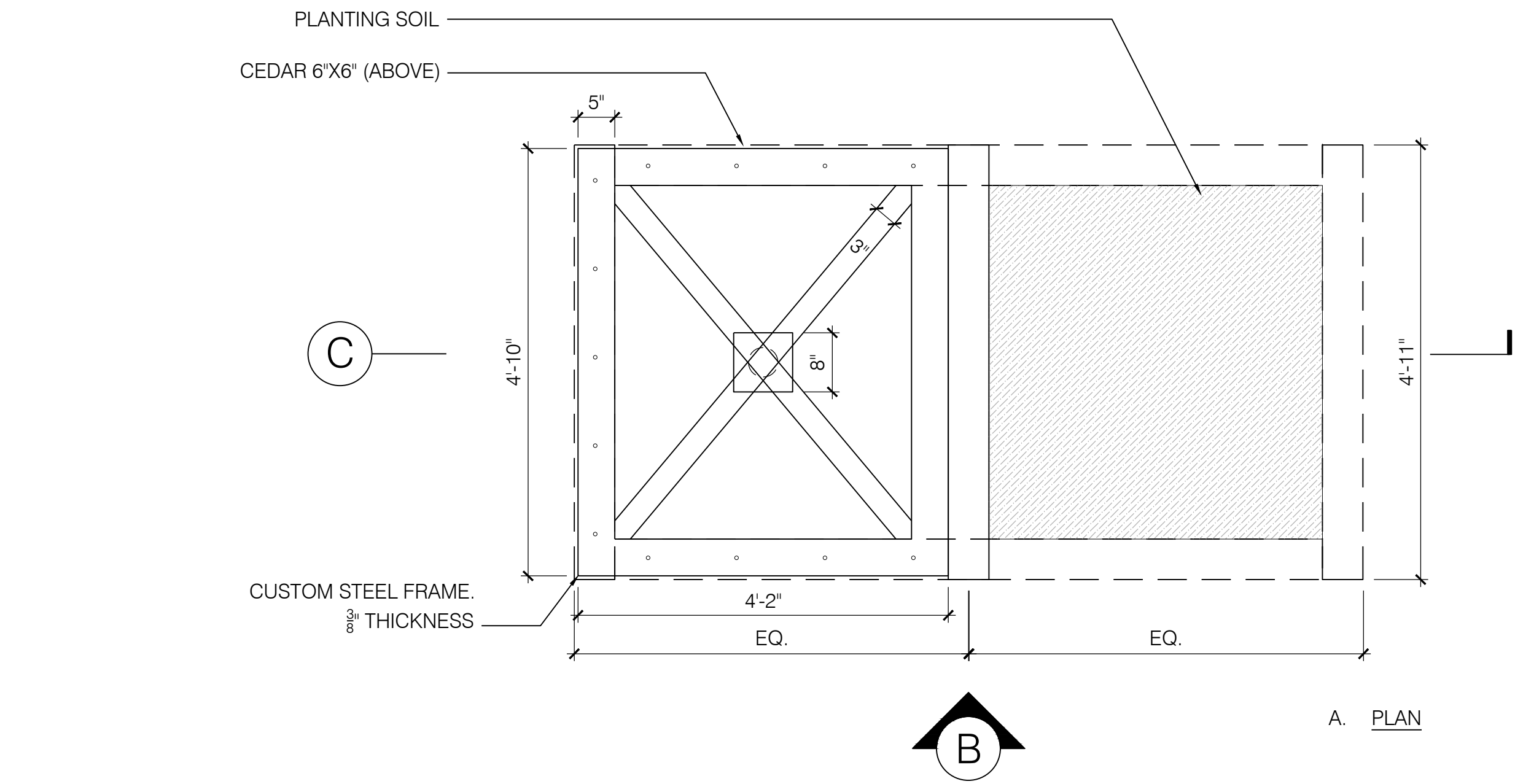
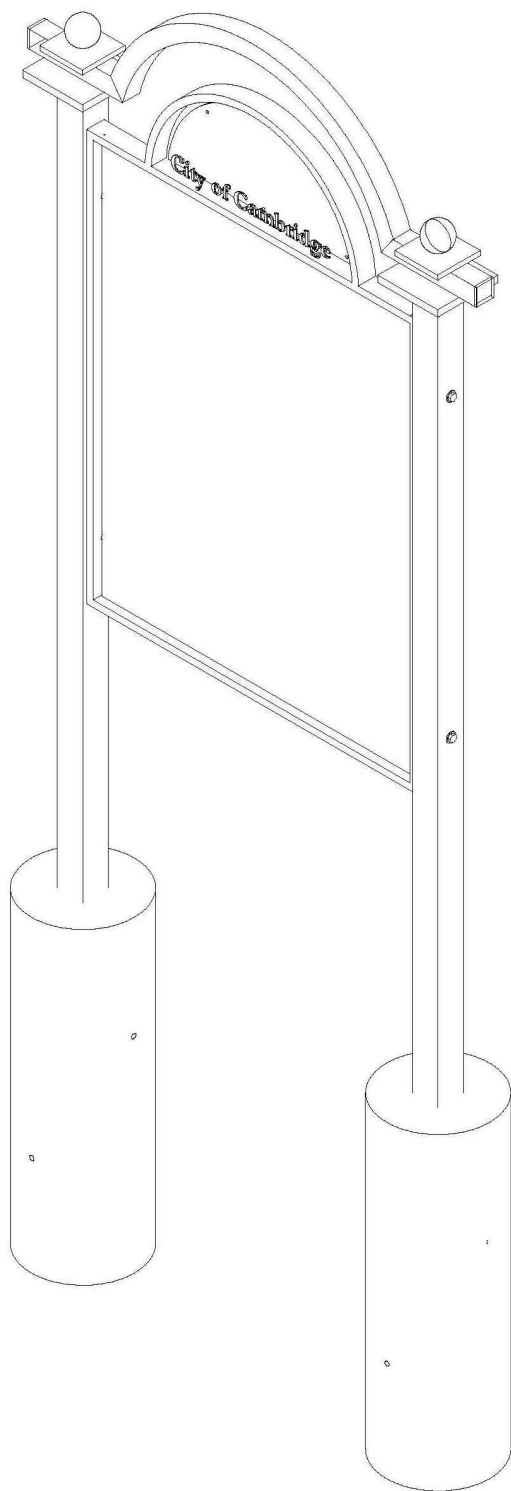
CBB1001 COMMUNITY BULLETIN BOARD
2 POST BULLETIN BOARD



CBB1001. 2 POST BULLETIN BOARD
POSTS: 11GA X 3 X 3 X LENGTH, SQUARE POST, STEEL
ARCH: 11GA X 2 X 2 X LENGTH, SQUARE TUBE, STEEL
FRAME: 1/2 X 2 X LENGTH, FLAT STOCK, STEEL
SURFACE: 11GA X SIZE, 3/8" HOLE, PERFORATED, STEEL
PLATES: 1/2 X 5 X 5 PLATE, STEEL
3/4" X 8 X 8 PLATE, STEEL
GRAPHIC: CAMBRIDGE SHIELD
HARDWARE: STAINLESS STEEL



2 BULLETIN BOARD
SCALE: NOT TO SCALE



1 ACCESSIBLE PLANTER
SCALE: 3/4" = 1'-0"

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CONSTRUCTION

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0 1"
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Scale	5 OCTOBER 2015			
Date	1502			
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Designed by	SK/RS			
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	L-5
Project	FRESH POND DRAINAGE IMPROVEMENTS COMMUNITY GARDENS	File No.	
Drawing	COMMUNITY GARDEN - DETAILS 3		